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NO. 11.

THE

MARYLAND FARMER:

A

MONTHLY MAGAZINE:

DEVOTED TO

Agriculture, Horticulture and Rural Economy.

S. SANDS MILLS and D. S. CURTISS, Conducting Editors.

W. W. BOWIE, Associate Editor.

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PUBLISHED BY

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BALTIMORE, MD.

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MARYLAND FARMER:

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Vol. XIII. BALTIMORE, NOVEMBER, 1876.

No. 11

The Centennial Show.

As this great World Exhibition impressed us—
in its immense aggregate and detail—the human
part—the individuals—were the most impressive,
important and interesting. We saw the men—
minds—who designed and developed it; nothing
in vastness and variety, was ever gotten up in
more completeness and order, from the smallest
detail to the largest structure, embracing the useful and unique—in every line of genius, art, skill
and science; from the farm and factory to the shop
and studio.

There stood the mighty, intellectual CORLISS—personated in his giant steam engine, with arms and hands swaying and driving acres and miles of machinery, in every branch of useful and fanciful fabrics; his universal mind designing and combining, in its comprehensiveness, with perfect harmony, the minutest detail as well as the highest,—each wheel and shaft.

By the side of it was the tiny, perfect glass steam engine, driving shaft and wheel, in perfect smoothness; and all occupying no more space than a traveling satchel; and in this perfect machine we see embodied the patient, skillful persons of the toiling Italian man and woman who made it.

In contrast with both of these, was a liliputian engine, a marval, almost a miracle, of diminutiveness and delicacy, yet showing the mightiness of men of genius and patient study—worthy of companionship—of its author, TAYLOR, with the Corliss. The Press thus describes it: "The gentleman took from his pocket a small tin case, and took from it what looked like a diminutive alcohol lamp, and, striking a match, started a miniature flame, and placed the contrivance on a corner of the platform which surrounds the mighty steam giant from Rhode Island. At first glance nothing could be discerned over this lamp but a small excressence which looked more like a very juvenile humming bird than anything else, but a close inspection showed that what was mistaken for liliputian wings

was the fly-wheel of a perfect steam engine, and persons with extra good eyes could, after a close examination, discover some of the other parts of the curious piece of mechanism. This engine has for its foundation a twenty-five cent gold piece, and many of its parts are so tiny that they cannot be seen without a magnifying glass. It has the regular steam guage, and though complete in every particular, the entire apparatus weighs only seven grains, while the engine proper weighs but three grains. It is made of gold, steel and platinum .-The fly-wheel is only three-quarters of an inch in diameter, the stroke is one-twenty-fourth of an inch, and the cut-off one-sixty-fourth of an inch. The machinery, which can be taken apart, was packed in films of silk."

Now, in looking at all of these wonderful things—great and small—we did not see the metal and other inanimate substance only, but we looked deeper and higher, and saw the immortal mind, which conceived and constructed them. So in regard to all the other works of use and beauty.

And what, by the side of these, are all of the butterflies of fashions, the moths and drones of society, who seem so useless, producing nothing but consuming much; they are of some use, or the greatest Creator of all would not have made and preserved them; they have a place and destiny just as their likes or anologies have in the insect kingdom; and though we are not to imitate and be like them, we are not to despise or ignore them, not while He suffers them, for a time, who "gives rain and sunshine alike to the good and the evil."

Hence, here, in this great assemblage of humanity and human work, we may study human nature—and nothing is so human as human nature—whereby to learn wise and pleasant and useful lessons, lessons of charity and reverence.

from Rhode Island. At first glance nothing could be discerned over this lamp but a small excressence which looked more like a very juvenile humming bird than anything else, but a close inspection showed that what was mistaken for liliputian wings side this noble personage stood the blest and bless-

ing Howe, who, by his lightning stitcher and stitches, the sewing machine, relieves thousand sof aching heads and tired hands, of the fairest and sweetest of God's great Creation, our women.

Then the inventors of priceless grain-sowers and silk-weavers—of reapers and knitters—all the great INVENTORS and DISCOVERERS, who have relieved and enhanced hand-labor, who have reduced drudgery and increased delights, in human industry—all, all—are here represented in brilliant array to the comprehension of commonest minds; from all zones and climes of both hemispheres.

The greatest delight we have, and the greatest interest that we see, in all this display, is that behind and above all, the greatest, we see the HUMAN—which designed and fabricated them, the generous motives which strove to perfect them.—Only for such considerations we might gaze on them as only the unsubstantial fancies of the "Aladin Lamp" stories, which even are surpassed, eclipsed—in brilliance and beauty—by much of the real things in our great Centennial Show.

So much for the first thoughts and impressions which thronged our mind, on first passing from and through building after building; and constantly, as we examined and wondered, the idea of MAN was first and uppermost—the aggregation of man's faculties, in fact, the GRAND MAN, alive and working; and while it enlarged our ambition and appreciation for our race, it correspondingly dwarfed our own self-esteem and personal consequence; we felt ourself less than the cricket on the locomotive driving wheel.

If any man thinks he is something, and is likely to balloon himself, let him stroll through Agricultural Building and Machinery Hall, and the bubble which bursts from his pipe stem won't fall quicker than his ego; and if any one thinks he is pretty largely known and knows a good many people, let him wander a day among 200,000 people at the Centennial, and meet scarcely half a dozen whom he knows or who know him, and he'll soon feel himself scarcer and a greater stranger, than old Sitgreeves, whose nearest neighbor had squatted down 20 miles off. But then, in all this humbled reflection and self-negation we had one consolation—it takes drops to make the ocean, and the smallest link connects the longest chain.

But it is not the works, characters and peculiarities alone of our own nation that we here see and compare; but those of nearly all the civilized world; from the Orient to the Occident; and from the Northern Isles to the Southern capes—all are here brought into contrast and association. And it is the greatest school we ever saw or thought of; more may be learned here in a week for useful,

practical life, than in years spent in some of our colleges and universities.

At the annual fairs, held by our States and counties, we often see many specimens of greatest excellence in vegetable and animal production; and also the best farm implements and machinery which mechanism has made; but here, the finest, most perfect and beautiful productions, in every branch, from all nations, are here to be seen.

In the stores, halls and residences of many of our towns and cities are seen fabrics and specimens of merchandise and rare virtu, equal, perhaps, to any here; but the mass, the multitude of all these things here, from all quarters and sections of the globe, has never before been equalled in one locality; their immensity and variety are almost bewildering to the beholder.

With all the grandeur and dignity of the Exposition—and it does certainly so impress us—there is one grand, exquisite farce; and it is as perfect in its way as any other exhibition here; we mean the national effigies; the dressed-up statues, in military and other clothes, purporting to be a faithful representation of national forms, figures and customs; some few of them are very fair, pleasant representations; those, for instance, representing Sweden and Denmark were the best and most lifelike to our notion of any; but generally, they are the veriest caricatures, and poor ones at that; and none are worse ones than those purporting to represent the soldiers and marines of our own country.

The exhibition of dairy products; fruits, flowers, vegetables and grains, while we were there did not come up to our expectation in quantity, but every thing was of the best quality, and as fine specimens as we ever saw any where; but their quantity has been greatly and creditably increased since. The same may be said of the live stock show.

APPLE BUTTER .- The rule is, one barrel of cider and eight bushels of apples; but, for my family of six, I take eight gallons of cider and two bushels of apples. Boil the cider down one-third; then, having your apples pealed, quartered and cored, put in as many as will cook conveniently, and, as they break and settle, add more apples. I put them in as fast as I think they will cook nicely, but can give no rule. I make it in an old-fashioned, "big brass kettle," out-of-doors, as it will do much faster than on a stove. It will take six or seven hours to cook the above amount, if your cider is boiled down before hand, which, I think is the best way. It must be cooked till it is a smooth mass, or till there are no chunks of apple discernable. I do not add the spices until it is nearly done, and then only spice and cinnamon, as we prefer that. It must be stirred constantly.

Harford County Fair.

MEETING, OCTOBER, 1876.

The third annual Fair of the Harford County Agricultural and Mechanical Association, was commenced on their splendid grounds, at Bel Air, on Tuesday, the 10th of October, and closed on Friday the 13th, after a most pleasant and successful exhibition, both in attendance and the show of stock, grain, fruits, implements and other articles; so that the officers, members and everybody else seemed pleased and satisfied with the result.

The weather was favorable and delightful, every day, throughout the fair, all that could be desired.

On the second day there must have been 3,000 persons present; and on Thursday the third day the attendance was variously estimated at from 8,000 to 10,000 people.

We never, at any county fair, saw a larger proportion of smart, fine looking ladies, arrayed in stylish costumes and neat dresses, than were present on this occasion. And rarely, if ever, have we seen a more intelligent and substantial mass of farmers than those who compose this Society.

The display of horses, cattle, sheep, swine and poultry, of various kinds, was large and highly creditable.

There was a handsome show of grains, fruits and vegetables, some of the most perfect specimens in each class; but the quantity was not as large as it would have been, had the season for these things been more favorable in the county.

Farming implements, of highest excellence, and in large numbers, were displayed from many factories.

Among them, the "Champion Drill," for sowing grains and fertilizers, attracted general attention, and was approved above all others, so far as we

The exhibition of articles of use, beauty and genius, in the main building, for domestic and fine art productions, was very fine, attractive and creditable to the ladies. Here was superior needle work, dairy products, jellies and preserves, and every thing in those classes generally shown.

Several fine carriages and buggies, and some fine harness, made in Harford County and York, Pennsylvania, were exhibited.

All in all, this was one of the most interesting county fairs that we ever had the pleasure of attending, and was a credit to old Harford County and members of the Society-to exhibitors generally.

November, so nearly made up, that we can only bered.

make a general notice of this fine fair, and cannot go into a detailed statement of the exhibitors and articles, as we should like to do; but, without any design of invidious distinction, can only mention a few of those with whom we are best acquainted.-We shall give the premium awards in our next number, when we have room.

H. D. Farnandis had on exhibition superior cattle, sheep, horses and vegetables, and we had a nice ride behind his fine stepping mare. He took some premiums.

Edward Haviland, a fine show of 30 varieties of apples, good poultry and three horses; he took several premiums.

A. B. Hollingsworth, and Messrs. Quimby and Hopkins, had varieties of fine fruits, with cattle, horses and swine; they took some premiums.

J. Parry & Son, fine specimens of German millet, large corn, beets, beans, grass seed, cabbages, and a splendid South-Down buck, for which he got a premium.

A. M. Fulford exhibited blooded horses, cattle, hogs, and some other articles; his is a splendid residence.

J. H. Janney, a stallion, thoroughbred "Barbarian," and some fine sheep; the stallion took a pre-

Doctor and J. R. Rutledge, horses, cattle and swine, with other articles, on which they took some premiums.

N. S. Hyde, fine stock, good vegetables, and a racing mare, which took a prize or two; he grows fine sugar corn and tomatoes.

Wm. Edelin, good stock, horses, cattle and sheep-got some of the premiums.

R. Harris Archer, showed Shorthorn cattle and twin oxen, with other articles, including a fine Shorthorn bull; it took a premium.

John Merryman was on hand with his splendid herds, taking several premiums, on Herefords.

Scores more of our subscribers had most creditable exhibitions, which took premiums, that will be named in our next, when we get the facts.

The races, of walking, trotting and running, were good and exciting; as were the charriot and hurdle contests. The other interesting amusements were velocipede, bicycle and mule races, wheelbarrow and greased pole frolics, all of which produced much merriment, for the classes who enjoyed that kind of sport.

Strausberger & Co., clothiers of Baltimore, made a fine show.

From Secretary Street, his assistant, Spicer, and the other officers, we received courteous attention It is so late in the month, and our Magazine, for and entertainment, which are pleasantly remem-

The Hopewell Band furnished excellent music on the first two days; and on the last two days, the splendid Bel Air band, with their new instruments, delighted the large assemblage with first rate music.

On Wednesday afternoon the regular address was delivered by Gen. C. E. Phelps; and it was a masterly effort, excellent in matter and spoken in a clear, pleasing manner, with more newness of thought and practical suggestions than usual. In fact, the address will afford good reading for all classes of business people. It was very attentively listened to by a very large audience, and afforded them useful texts to think about.

And we may say, right here, we have never at. tended a county fair, of such large attendance, where such general good order and decorum prevailed throughout the whole exhibition, with so little intoxication; all of which is highly creditable to the management and vast attendance; and what also pleased us much was, that we saw none of the gambling establishments which are too often a curse to the fairs of the country, wherein foolish men get fleeced.

We had the pleasure, which we shall long remember with delight, of being entertained at the splendid residence, "Stockdale," of H. D. Farnandis, Esq., and passing the evening with his elegant and intelligent family. Here we met other interesting company as the guests of this fine old homestead; among them, Hon. Charles B. Roberts, John Merryman, Mr. Street, Mr. Walsh, and-as the best of the wine at the last, &c .- Miss Grace Bigelow, of New York,

In the courteous, systematic manner, and intelligent conversation of Mr Farnandis, we were very pleasantly reminded of the agreeable entertainment we have often enjoyed at the old Virginia residence of Col. S. S. Bradford, at Culpeper, Virginia, where the home is distinguished by cordiality and refinement, while Col. B. is a superior farmer and breeder of fine stock.

On Friday evening, at the close of this most successful and pleasant county fair, we were invited and rode to the pleasant home of Mr. R. Harris Archer, the President of the Society, whose handsome farm is a part of the celebrated "Deer Creek" section, embracing the "Tobacco Run" and "Thompson Run" neighborhoods; and our visit here will long be remembered with pleasure. Mr. Archer drove us to different sections of the neighborhood to see such fine farms, as those of Mr. Janney, the Lees, the Silvers, Woolseys and many

We have, no where in Maryland, seen better lands or finer farms than those which make up this

"Deer Creek" region; and the farmers, generally, who occupy it, are worthy of their possessions, as they seem to cultivate them well, and have fine buildings, good stock, and use the best of tools and implements; while most of them take and read the MARYLAND FARMER, which can result only beneficially to them. They also maintain a live farmers' club, which meets monthly to discuss matters of interest to them and their noble calling.

We found this "Deer Creek" country reminding us, in many respects, of the "Genesse Country," N. Y., where the writer of this was born and raised; the face of the country, the character of the soil, and most of the varieties of the timber, much resemble that celebrated country, of superior wheat, flour, fruit and cattle.

One of the best farms in this section is that of J. H. Janney, which, being too large for one occupant, we were told it is for sale, in sections.

At and in the vicinity of Jerusalem Mills we noticed some fine farms, handsome residences, and good orchards, showing that the people live there.

Among the exhibitors, of creditable stock, grain and other articles, whose acquaintance we did not have the pleasure of making, were the Websters, Swartzes, Lees and several others, who we were told had fine farms.

There is much more, and many incidents, we should like to write about, but must be content to defer till another time; we will simply say further, that we were highly gratified with our experience at the Harford Show, and when they have another, may we be there to see.

However, we must not forget the premium baby; a beautiful, modest lady sat in the ante-room of the office, with a bright, blue-eyed baby in her arms; Mr. Farnandis touched our shoulder, saying -"Here, Colonel, I want you to see our premium baby, the finest in the county;" we looked a moment, reached out our hands, exclaiming, "pretty and worthy;" the mother's face sparkled with joy and blushes, as only a proud, modest mother's can; the baby came to our arms; we kissed it and shook it, it crowed, and then the mother took it.

If we were quite lively and demonstrative, in our admiration and delight, with the premium baby and mother, as to enlist the attention of an-other gentleman "interested in that baby," it must be charged to the account of the sly and genial gentleman, Mr. F., who brought us in the range and circuit of such attractive charms, to which we

are very susceptible always.

When all of the farms, gardens and orchards of rich, handsome "old Harford," are cultivated and ornamented up to their best, and as some of them are, then we shall see more premium babys, flowers, fruits and cultivators, wives and all other charms and delights which so justly belong to the noble, faithful and intelligent cultivators of the soil.

Kent County Agricultural Society.

The annual meeting of this association was held on their grounds, near Chestertown, on the 26th, 27th and 28th of September. We had the pleasure of being present, and were pleased with what we saw. We made many agreeable acquaintances, and enjoyed the hospitalities of the beautiful home of the President, Capt. Skirvin, situated directly upon the shore of the Chesapeake Bay.

Among other old friends, whose courtesies were lavished on us, we cannot forget that warm-hearted gentleman of the old-school, Col. George Gale.

The exhibition reflected great credit upon those through whose exertions the association is supported, and it is to be regretted that in a county so famous for its large and superior fruit crops, its fine lands and good farming, and its superior roads and road system, that a greater number of the landowners, and persons engaged in agriculture and horticulture, are not active members of this useful society.

An united and generous support of this society by the whole people of the county, would make it one of the largest and most flourishing in the State. The unusual facilities it offers to visitors, by rail and Bay steamers, from Baltimore and Philadelphia, would attract great numbers from those cities yearly, to see this splendid fruit region.

We missed seeing Col. Wilkins, the noted peach grower, but his son-in-law, Mr. Emory, was on hand, and, as always, with fine specimens of fruits, especially his pears. Mr. E.'s pear orchard contains from 1,600 to 2,000 trees in bearing, and they yield him great profit.

Of our friend, and his orchards, we shall speak in a future number of the FARMER. It seemed to us that every body in this county was a fruit grower, to a greater or less extent. The equinoxial storm did great damage to the fruit and the trees this year, and on that account there was not so fine a display of fruits as would otherwise have been.

We cannot close this brief notice without saying that Mrs. M. Stephens exhibited a large collection of canned, preserved, brandied and pickled fruits and vegetables, superior in beauty, and in the tasteful arrangement of them within the jars, to any we ever saw at any State or county fair, and we have been to many where we thought we had seen the acme in this class of liouse-hold industry.

NOTE.—At this fair, which pleased him so much, our associate, Col. W. W. W. Bowie, delivered the Address, which he was too modest to mention in his notice of the occasion, and we see that the papers speak highly of his effort.

Cultivation of the Carrot.

If it is the desire of farmers to raise large and paying crops of the carrot, such can be produced with a great degree of certainty by a liberal dressing of good and well decomposed manure to the land, which should be plowed in as early in the spring as possible. As soon as the weeds have come up, the ground should be cross plowed as fine as possible with a swivel plow; the land should then be harrowed and rolled, when it will be ready for the seed.

The seed should be soaked in warm water twenty-four hours previous to planting, and sunned a short time to dry the surface moisture, and the seed may not clog in the sower. The seed may be planted with any suitable machine that will sow thin. Two pounds of seed per acre is more than enough if judiciously planted. Too thick sowing results in very unnecessary and expensive thinning; or, if neglected, in a small growth of roots, expensive to harvest and to handle. The seed may be planted from early May to the 10th of June .-Our practice is to plant in straight rows twentytwo inches apart, and thin the plants to three or four inches apart in the row. The after cultivation of the carrot should be always prompt; "hoe the ground and not the weeds," should be the motto.

The horse hoe can be used in the cultivation of the carrot to a very considerable extent, and our cultivation is very like that given the mangold.— English turnips can be sowed between the rows with the seed sower, by the 20th of July, without injury to the carrot, and will add materially to the product of the land.—O. B. Hadwen.

It is not too late, October 1, to sow carrots in Maryland, if warm soil and dry location be selected. No better crop can be raised for milch cows and horses.

USE OF AGRICULTURAL PAPERS.—Many persons throw the blame of failures in producing crops upon the agricultural papers, in which were found details of experiments, showing the good effect of the course pursued, and which in the first-mentioned cases proved a failure. In all things judgment must be used. It will not do for a Southern or Western farmer to follow blindly the practice of the farmers of the Middle or Eastern States. Difference of climate and soils must, in all cases, be taken into consideration. Nevertheless, there is no more sure guide than these same agricultural papers. Let each one take such a paper, and induce his neighbors to do likewise, and at the end of the year all will agree with me that they pay for themselves every year, and pay good interest also on the investment.—O. S. Templer, in County trv Gentleman.

Agricultural Calendar.



FARM WORK FOR NOVEMBER.

This month seems the time for closing most of the out-door work on the farm, hence, we have but few hints to trouble our readers with. If for some reason to be regretted—such as too much rain, sickness or other causes—you have let the proper time slip by, it is yet not so late as to deter you from sowing.

WHEAT AND RYE.

They ought to be up and growing, but some years ago we knew a fine crop of rye made, when it was close on Christmas when sown. It was plowed in at least three inches deep. We remember that the plow was left in the furrow, as severe snow storm came up. It proved cold, and snow was nearly all winter on the ground. About an acre was sown but not plowed in. The plow was a boundary between the rye plowed in and that which was not. When winter relaxed its rigors, and a warm spell came, it was seen that the rye was short but quite green, and the uncovered rye was as good as that which had been covered, so at the harvest it proved a fine crop. But all was owing to the protection of the snow. Hence we conclude late sown grain should be covered deeper than early sown, and all should be put in properly. We have seen superior crops of volunteer rye in a clover field where the clover was being cut for hay; yet these are accidents, or freaks of nature, that are not to be followed, or make excuses for lazy, careless people. Wheat ought to be sown at once, and you may make a fair crop, if your land is fertile, well fertilized, the ground mellow, and the seed nicely plowed in, or drilled in, three inches deep. We should roll late sown wheat, so as to close the earth over the seed, and we should roll it during winter or early spring, when by the action of frost the earth becomes cracked over in little seams, and the plant-roots likely to be exposed and injured. Such a state of the ground would be a fair opportunity to sow grass seeds, and roll them in, thereby benefitting both the wheat and the grass crops.

CORN GATHERING.

As soon as the corn is sufficiently dry, gather it, husk it and put it in the corn-crib. Some should be pulled from the stalks and put under cover to be husked out rainy or stormy days, the rest to be husked in the field. Get your corn in the barn or crib before severe weather.

Corn Husk..—As you husk the corn, have the shucks put away carefully under cover; sprinkle a little salt over the layers of shucks—tramp down close, and in mid-winter they are as valuable and as much relished by the cows as the best of hay.—They then may be cut fine, steamed with some bran, and fed to the milch cows, or may be fed dry, like hay.

Corn Cobs—Are also valuable, if crushed, boiled or soaked in boiling water, with a little salt. By their use much hay may be saved for market, and animals will not suffer, but give as much milk or take on fat as quickly as if confined to hay. So with corn stalks, which are thought to be of no account, yet run through the cutting box with lacerator attached, steamed or boiled supply the best of provender and repay for the labor of preparing this highly relishable food so full of saccharine matter. It has been asserted that two tons of stalks, thus prepared, is equal to or better than a ton of the best hay.

ORCHARDS.

What we said last month on this subject is equally applicable now. We, therefore, only allude to what we then advised, and trust that many followed our advise. This is a good time for setting out an orchard of the different sorts of fruit and nut trees, shrubbery and timber trees, ornamental and useful. Remember chestnut, walnut and hickory nuts should be planted as soon as they fall from the tree, one or more inches deep, according to the thickness of the shell; cover over with leaves or other mulch. Although they can all be planted in a nursery, and with care will bear transplanting, yet it is best to plant the seeds just in the spots they are desired to grow; plant three or four a few inches apart in the same spot. If all should come up, the best one can be left and the others drawn up and planted elsewhere. It is well when planting to mark, by a stick or stone, each spot; thus they can be set on the lawn or fence side, road-side or in woods. Those who have gullies, or ugly knolls they would like to conceal, should procure as soon as the pine cones are ripe, before they shatter out, and scratch the ground where they are to be scattered, and cover it over, or here and there with pine or other brush, as soon as the pine cones have opened partially under the influence of a warm room or where the sun could have its effect, beat or flail the cones and gather them, seeds and hulls, and all in a bag, and sow them as you would wheat over the brush, or brush in rows .-They will vegetate in one or two years, and soon make the knoll an ornament and valuable. Keep sheep from those knolls until the pines are four or five feet high. The ravines and gulleys may next spring be stopt and made profitable by planting the bottom and lower sides of the banks with willow cuttings, poplar cuttings, and those of other soft wood trees. Get the cuttings as soon as the sap is up, and let them be from two to four feet long, pushed into the ground about half its length. They will all be likely to live. We have seen willow and poplar in such situations-where it was moist always-grow, when they had been driven in for stakes to wattle fence; therefore, they were at least at top two inches in diameter and more at the point where driven in the ground. They were set as they grew on the tree, that is, the big end in the ground.

Such as wish to propagate that most valuable tree—the yellow locust—ought to save all the seed they can this autumn, keep it dry, and next spring we will tell you how to sow it. They can, next February or early in March, procure young trees and trim them very close, like bean poles, and plant out carefully by the road side or elsewhere. The locust is very tenacious of life and will endure rough treatment, besides are not exhausters of land, as proven by the fact that crops grow well under their shade and close to the tree. Of the great value of this tree on a farm, especially one scarce of timber, it would be superfluous to speak, as every reader fully appreciates its great worth.

STOCK OF ALL KINDS.

Under this caption we decline to say auything this month, except to refer our kind readers to what we said on the subject in our last—October number—of the MARYLAND FARMER.

APPLES AND CIDER.

Gather your winter apples with care. Make all the good cider you can—poor cider is not worth making. If persons would only take time and pains, good cider can always be made, and be worth from \$8 to \$15 per barrel—good to prime. Unadulterated, strong vinegar will fetch paying prices, but the maker must get his reputation for honesty in this line, and then his brand will sell. Vinegar, like other liquors, must be made up to the standard always, or purchasers will be shy—no "crocked" vinegar, or the maker will be left with it on his hands. It must be as represented.

The Forests of the World.

The forests of Europe are estimated as being 500,000,000 acres in extent, or about 20 per cent. of the whole area of the continent. In North America is is reckoned that 1,460,000,000 acres are covered with trees, of which 900,000,000 are in British North America. In South America the forests occupy 700,000,000 acres. The total amount for the two continents of the New World and Europe gives 6,600,000,000 geographical miles. The proportion of forest land to the whole area of Europe, as above stated, is computed at 20 per cent.; in America 21 per cent. Supposing, therefore, 20 per cent. to be the proportion in Asia, Africa and Australia, the grand total of the forests of the world would cover a space of over 7,734,000 geographical miles. The areas of State forests and woodlands are estimated at the following figures in the following European countries: Prussia, 6,200,-000 acres; Bavaria, 3,294,000 acres; France, 2,700,-000 acres: Austria, 2,230,000 acres; Hanover, 900,-000 acres; Wurtemburg, 460,007 acres; Saxony, 394,000 acres; England 112,376 acres.

The range in the hight of trees varies from the miniature alpine willows of a few inches in hight to a stupendous Wellingtonia, which grows to the hight of 250 feet, although it is stated that one of the eucalypti often reaches a hight of 450 feet in Victoria. In Sclavonia, a tree called the sapin, attains a hight of 275 feet, and the umbrella pines of Italy 200 feet. The California big tree is said to girth 96 feet.

The destruction of woods and forests, however, is very enormous, and in the majority of instances no attempts are being made for their reproduction.

Land and Water.

Possibilities of Wheat Culture.—Although the average yield of this cereal for the last few years has not probably exceeded fifteen bushels per acre, there is really no valid excuse for a rate of production so ridiculously low. While some farmers in nearly every section of the country seem to find a difficulty in getting even as high as fifteen bushels per acre, it is a well known fact that others, even in the same localities, succeed in getting from twenty to thirty bushels, and a few as high as forty or fifty bushel. These facts clearly prove that there is a possibility in wheat culture that some farmers know how to reach, and others do not.—Exchange.

LARGE POTATOES.—A correspondent writing to us from Summit Point, says that Mr. Thos. Locke has raised some of the finest Irish potatoes he has ever seen, one of them before him/weighing 2 lbs. and 12 ounces.—Ex.

For the Maryland Farmer.

Deep or Shallow Plowing.

WASHINGTON, D. C., October 5, 1876.

Deep tillage is so essentially different from deep plowing, in common parlance, that I did not appreciate the two would be confounded by you in replying to my August letter. The Southern farmer, save in rarest exceptions, uses only a surface plow in preparing his ground for wheat, corn and cotton, and deep plowing to him, as to me, simply means deepening its furrow. Subsoiling or other mode of deep tillage does not enter into our practical farming system with above field crops.

I certainly felt I was avoiding discussion of the deep tillage question, as in distinction to deep plowing, by my statements "that the new-comer could not fertilize the yellow clay brought to the surface by his improved plow and two strong horses," and, "that elevation of the immediate subsoil was attended with detrimental results;" and that I used this language in the same sense you have, may be seen by quotations from your various articles in current volume.

On page 93, you say, "plow the worn-out fields several inches deeper than usual." Page 193, "if the land is very poor plow two or three inches deeper than usual." Page 276, "plow deep, the deeper the better." Page 295 you urge turning up and raising the subsoil from twelve to twenty inches deep. But where, as on page 276, deep tillage is suggested as opposed to surface plowing, the subsoil plow is specifically named, and you inform us that it follows in the wake of the surface plow. I do not think that I misinterpret you on this point, for I remember no article in the MARYLAND FARMER which confounds the surface with the subsoil plow in urging deep plowing upon farmers. I am an advocate of subsoil disturbance, and join issue with you only upon the one point, to wit: elevation of the hard pan to the surface by means of deep plowing. I unqualifiedly demur to any suggestion of yours which advises the farmer to bury the surface soil underneath two or more inches of hard pan. I deem it an exhausted and nearly intractable element, and hardly more worthy of elevation than so much brick dust. I insist that it must be ameliorated and fertilized in its site by means of underground disturbance through subsoil plow, clover, etc., before the farmer should attempt its elevation. The surface soil is the only true seed bed, and no impoverished substance should ever cover or bury it.

I trust now the issue is joined between us. I fully accept G. B.'s views. He concedes the hard pan should not be elevated, and I concede his sub-

soiling. I stated in my letter that I regarded the hard pan as more impoverished than the surface soil. His theory as to cause of that poverty seems sound. I only know that southern clays when taken from a depth below surface influences are eminently fertile, while at the point where the plow rests or slides they lack all the elements of fertility. The logic of his first four paragraphs seems against you, and hardly "controverts" my position. The English steam plow tills from twelve to twenty inches deep, but does not bury or reverse the surface soil. The subsoil is thoroughly loosened and disintegrated, but none of it is elevated to or upon the surface.

The Irish trench accomplishes precisely the same results; and in no instance have I seen the surface soil buried with subsoil by any Irish spadesmen.

It cost Mr. Waring a \$100 per acre dead loss to find out the difference between his book and newspaper theory of deep plowing and its results in practice, notwithstanding his thorough underdrainage, severe winters and abundant manures. No Southern planter has either for his field crops.

Page 533 Country Gentleman, current volume, a correspondent, from Monroe County, New York, says "The mania, a few years ago, for deep plowing has subsided, and now farmers plow hardly deep enough for wheat." "A little subsoil may be turned up for wheat on strong, rich soils," and he apparently advocates that little because he has seen good effects derived from spreading clay taken from wells. Harris Lewis advocates the spreading of "pure clay" upon grass lands in one of his dairy essays. The universal southern practice of "skimming" must certainly be supported by some sound reason, for intelligent and observing men follow it. and I am not surprised that new-comers, who ignore the custom of such farmers, should so generally reap disastrous failures. But I do not think they would meet with success should they take a changed condition of soil and climate for granted. plow cautiously, deviating experimentally only from general custom, and appreciate that men fully their equals in sagacity and powers of observation, and who possess, beside, a lifetime's experience in handling southern soils, may be right even if they do use light horses and plows.

A Mr. "A. C.," writing from Knoxville, Tennessee, to the New York *Tribune*, says Northern men fail there because they buy poor lands and "know too much."

The latter charge is what I would particularly guard the immigrant against in Maryland and Virginia, especially on the deep plowing point, if he desires to escape the epitaph of "killed by elevated hard pan," which hundreds have written for them.

selves. None will fail under the teachings of "G. B.'s" fourth paragraph, while few can escape disaster who persistently turn up from two to twenty inches of the "uncivilized hard pan."

This broad issue between you and myself can be determined only by comparative experiment.

The two theories must be contrasted side by side, and I earnestly trust your readers will favor us, through your columns, with their experiences.—Who has planted his field crops with both deep and shallow plowing?

To "M.," in October number, I would propose the query: Have you ever spread clay taken from wells or cellar bottoms upon grass lands? Harris Lewis regards pure clay as nearly equal as top dressing to barn yard manure. My observation certainly sustains him in his assertion, for it is based upon the experiences of many farmers.

R. S. L.

SMUT IN WHEAT.—It is now a well understood thing that seed wheat must be pickled in vitriol in order to destroy the vitality of the smut-germs.—This smut is a fungus of the genus *Uredo*, and the one infesting wheat is *Uredo caries*. The germs are present in the seed when sown, and they grow as the plant matures, rendering the flour made from a crop in which smut is present very offensive, and often unfit for use.

A good pickle in which to soak seed wheat is made by dissolving a peck of coarse salt in twenty gallons of water, and adding thereto one pound of blue vitriol, sulphate of copper. The seeds which float should be taken off and destroyed. It is scarcely necessary to impress upon farmers the necessity of pickling their seed.—Canada Farmer.

HIRED MEN.— Get the best hands, and keep them. When a man has become used to his work and his employer, he is worth much more than a stranger. There is a way of making men interested in their work, of satisfying their self-respect, giving them credit for success, while holding them strictly responsible for failures, and above all by paying them promptly and liberally, that will make their work worth double what it would otherwise be.—Exchange.

RHEUMATISM.—A Delaware County man has cured the rheumatism by carrying a raw potato in his pocket three weeks, and he says he has recommended the remedy to his friends with similar effects. No one, therefore, should suffer with rheumatism as long as the potato crop is not a total failure.—Ex.

GARDEN WORK.



GARDEN WORK FOR NOVEMBER.

If you have made a good garden this year, it will behove you to take care of all the products left on hand at present. Not much is required in the garden this month beyond planting strawberries and other small fruits, and keeping clean and thinning small salads, spinach, &c.; besides taking and putting away for winter all vegetables. Carrots, parsnips and salsify can remain in the ground, to be dug at intervals during the season. They are best kept out, and taken up in such quantities as will be wanted for two or three weeks, as they wither and lose flavor if exposed long to the air and free of the moisture of the ground. Before the ground freezes deep, secure your cabbages and turnips and beets, also your Chinese radishes. The black Spanish will stand the winter if left where grow-

ing.

All vegetables put in stoops should be covered with leaves or dry straw, to keep them from immediate contact with the earth, thrown on to keep them dry and protect from frost. Put on two or three inches, in depth, of earth, and as it settles and the weather grows coider, increase the depth of the earth—covering to six or eight inches; pat it firm and see that it be in a conical form. If the pits are round, they should not be more than four feet in diameter, two feet deep, and raised like a pyramid about two feet six inches above ground.

If in trenches, they may be made four feet wide, brought up to two feet above ground, and not more than eight to twelve feet long, on the top of the sharp ridge of earth, it would be well to lay straw or fodder with a plank to keep it in place, or what would be a better finish, tack two planks together, at their edges, to form a V shape, and put it as a roof over the pit.

Those who wish to be ahead of their neighbors, next spring, in early vegetables, may now prepare small beds, and plant small onions, sow parsnip, carrot and beet seeds. Winter radishes and lettuce may also be sown. When cold weather comes, cover the beds with leaves or straw lightly, and put on some brush to keep them from blowing away. The brush should be open, or leafless brush, to admit the light and heat of the sun.

Side-Hill or Swivel Plows.

The readers of the MARYLAND FARMER will remember that we have heretofore, more than once, commended the utility of the swivel plow, as well for level land as for side-hill plowing, for which they were mainly devised.

We take the following interesting account of that useful implement from the New England Farmer:

HISTORY OF THE SWIVEL PLOW.

Mr. Editor: - I saw, in the NEW ENGLAND FAR-MER, of August 12th, a notice of a trial of swivel plows to be held on the 23d inst., on the farm of the Agricultural Editor of the FARMER. I am heartily glad to see that you are in earnest for righting things about that most important of all farm implements, the swivel plow. I have had a number of different patterns sent me for trial, some of which are not worth the wood and iron they are made of. I have had the swivel plow, and no other, on my farm since 1856, and I will say that, if there is any honor in bringing out a valuable farm implement, I claim the honor of introducing the swivel plow. I had the agency for selling plows for the firm of Messrs. Prouty & Mears, Boston, for a number of years. About 1854 I suggested the idea to that firm of a swivel plow for plowing flat lands, and they thought favorable of it, but did not incline to take hold of it, and the firm failed shortly after. Messrs. Blake, Barnard & Co. succeeded them in the business, Mr. Prouty being a silent partner.

In January, 1857, I went to Boston to spend the winter, and while there was invited by Mr. Prouty to go over to South Boston and visit their factory. On arriving there, Mr. Prouty says, "Now you must give directions to our pattern maker for carrying out your plan of a swivel plow for flat land." I accordingly gave the directions as I thought it should be made-by making the mouldboard longer and broader, also the point to cut wider, giving it a longer rake, so that it would lessen the draft.-This plow, by the way, was on the double Michigan principle. In a few days I was notified that the patterns were done, and I must go to the factory and see them. I went with Mr. Prouty, and to my utter astonishment I could hardly tell what he had made, or what to call it. I pointed out the defects, and he commenced on another, and made the forward pattern perfect, but the rear mould was not as it should have been, and I told the company to have the maker try a third time, and I thought they would get a perfect plow; but they did not see so many faults in it as I did, and went on and made a few plows from those patterns. I

had two of them, and they do first rate work, but the draft is too heavy. I have one now which I keep for breaking up green sward, and I assure you there is no plow that will equal it in work.

Within a short time after this, Blake, Barnard & Co. failed, and then Messrs. Ruggles, Nourse & Mason took the manufacturing of that kind of plow, both the Michigan or double, and the single mould. The preference for swivel plows has become almost universal here, in the Connecticut valley.

I have now the Holbrook pattern for our common work, at I think that the best I have tried. I have used no other than swivel plows on my farm for twenty years, and think I should buy a new one every year rather than use the landside plow and have the dead furrows. Where there is a dead furrow, the crop, of whatever kind, is but about one-half of what it is elsewhere. Then the convenience in working land perfectly smooth is, to me, a great gain.

Moses Stebbins.

German or Golden Millet.

As this wonderful grass is of great value to any farmer having long winters, and who needs a good supply of excellent hay, I propose to give my experience with it. It is sown the same as oats, from three pecks to one bushel of seed to the acre. The blade first resembles young corn, coming out alteruately every five inches on the stalks, which grow from 4 to 7 feet high, having a large head, 11 to 2 inches in diameter, and 8 to 10 inches long; one head yelds \(\frac{1}{4} \) to \(\frac{1}{2} \) pint of seed. It matures in about ten to twelve weeks from the time of sowing, ripens slowly, and never falls down and wastes. It resists the severest storms. The time it will stand after it is ripe, and the manner in which it resists wind is wonderful. It will yield from 40 to 100 bushels of seed, and 2 to 4 tons of hay to the acre; will grow in wet or dry, rich or poor land, and is the surest crop I have ever raised, and the most profitable. One rain on it will insure a sure crop. and it is not like the old, common millet or Hungarian grass. Being a great fertilizer, it leaves the ground in a light, mellow condition, and free from every thing that grows, the growth being so luxuriant, that it literally smothers out every thing else. It should not be sown in any climate until danger of frost is over. It is sown in this climate from the 20th of April to the 1st and 15th of August with good results. It can be cut as hay, but the nicest way is to cut as oats or wheat, and bind in bundles. would recommend it unhesitatingly to any farmer as the very best thing he can grow. Fowls of all kinds fatten on the seed, and horses and cattle eat it eagerly. For milch cows it is unsurpassed.—N, Y, Tribune.

Live Stock Register.



Leading a Calf, and a Laugh.

They wanted to turn the calf in the pasture.-He was four weeks old now, and had been in the pen long enough, and so Tom said he'd just put a rope around his neck and take some milk in a pail to coax him across the garden into the lot. But Maria said it was all nonsense to go and get milk to fool around with that calf that way; that if she was an able-bodied man she guessed she could get a calf that size into a lot without making fuss enough to raise a barn; and, in fact, she'd put him in the lot herself before she'd bother to get milk.

Well, they talked awhile about it, till Tom got mad, and said he'd like to see her lead that calf over that garden and put him in the lot; that if she would he'd be dumbed, - and then she said it was not necessary for him to swear about it, and added, that she'd show him that she could

Then Tom, the mean thing, went up on the piazza, and sat down and smoked, and waited events. He had tried leading a calf before then, and he knew the leading consisted mostly in pulling and lifting it around by its tail till its nose was in the right direction, and then pulling it again .-But he would'nt say any thing; not because he was mad, oh, no, of course not, but because he would'nt.

So Maria got a rope and climed in the pen, and Tom felt disappointed when he saw how still the creature stood while she put the rope on its neck, and a glow of satisfaction or heat-Tom could'nt tell which-overspread Maria's face as she straightened up and prepared for the first act.

But a calf is not to be depended upon any more than any body else in this world, and this calf in particular was full of deceit. Maria knocked a couple of boards off the side of the pen, and much coaxing many endearing words got the calf out: then, with many efforts, she got him a little further. She had taken a hitch around her waist with the rope, for fear she would drop it, and he would get away, and run over the garden, but she little knew how much that little hitch would cost her.

She got the calf half-way across the garden, and Tom began to be afraid she would get him all the or a fraction more than 12 cents a head per day

way, when the little wretch gave a bla-a-a, and frisked around a little, and tied his tail in a knot over his back, and then started off on a run, and Maria ran after him, of course, because she was hitched. He ran like a racer, and it seemed to Tom that Maria took steps two yards long every jump she gave, and that man actually laid down on the piazza, and rolled and laughed to see that calf tow his wife around. And Maria just had to run or do worse, and the more she had to run the madder she got, because she could'nt stop, and the garden was getting ruined, and she could hear Tom laugh. Well, that blamed calf ran her pretty near to death, and might have killed her, only she stepped on her dress at last and fell down and rolled over on the onion bed, and the calf ran round and round her, and bla-a-ed and roared and kicked his heels in the air, and would have stuck his horns in the ground if he had any, and pretty near pulled the arm off that he was tied to, and, just as he tripped on the rope and fell down, Tom got there and cut the rope and set Maria free, and leaving the calf tied to a tree, took her in the house. She cried after the manner of women, and told Tom she'd cuff his ears if he did'nt stop laughing at her, and he said he could'nt help it, and then her tears flowed afresh, and he said he guessed it was the effect of the onion bed, and then he got some water and bathed her elbow that was skinned, and put a plaster on the tip end of her nose, and gave her a fan, and then got some milk and went and inveigled the frisky brute into the lot. The garden was pretty near hashed, but it recovered, and so did Maria, to that extent, that she can now laugh, as heartily as Tom, over her experience.-Detroit Free Press.

Steamed Food for Stock.

B. J. Stone, of Westboro, Massachusetts, writes in the Boston Cultivator: I tried for twenty-five years the feeding of dry hay and grain, and for the last five years I have thoroughly tried steaming my coarse fodder and roots, with most satisfactory re-I cannot afford to take my stock from steamed food and feed them on dry hay and grain, as I am satisfied with my past experience what the result would be. I will give you the cost of keeping my stock on steamed food, and would like to have some other gentleman favor you with the cost of feeding on dry food, and compare results. I will give you at this time the cost of feeding 16 yearlings and 2-year olds and 17 cows on steamed food:

150 lbs. corn fodder and straw, at \$10 per ton\$(75	
96 lbs. cob meal and shorts	35	
45 lbs. shorts fed in hay tea	50	
Value of coal to steam	36	

Training Colts.

A writer, who appears to know his business, offers the following on training colts: A cool head, and calm and steady nerve, with a quick eye, will go far toward success in conflicts with even the most irritating animals. Moreover never forget that the law of kindness is stronger in its influence on the animal creature than the law of force. Remember this also: Do not make much noise when having a conflict with a colt. Say little to him and nothing to any one else. Do not be shouting, "Get up!" "Whoa!" "Look out there!" and the like. Silence is a great virtue in a horse trainer. A low-voiced groom is worth his weight in gold about the stables.

A horse cannot understand sounds like a human being, and the less said to him, for the most part, the better. A few sounds, of course, are necessary; the word "who" being one of these. This word should mean stop; it should never mean any thing else in the colt's ears. It should be pronounced in a quick, sharp, imperative tone. It should never be drawled out or prolonged, as if there was a dozen a's, instead of one, after the o, as is often the case. Whoa means stop, and when a colt hears it he should stop, and stop in his tracks, too.

The method is simple. Put your bridle on to your colt; buckle in a pair of long lines, and, taking position in the rear, start him again. After he has taken a few steps, say "Whoa!" at the same time giving him a slight twitch on the bit sufficient to cause him to stop. Do not be rude or harsh, but gentle and firm. Start him now again, and repeat the sound and the movement of the hand .-The colt will soon catch the idea, and learn what the sound means. Then you can go on, and teach him that it not only means stop, but that it means stop instantly. A few days of this simple treatment will suffice to teach him thoroughly the lesson, which, when well learned, he never forgets, and the real value of which can scarcely be overestimated. If the colt is worth \$500 when broken in the ordinary way, he is certainly worth \$600 when instructed full in the manner set forth. Any sensible man, in purchasing a horse for family service, or for fast driving on the road, will gladly pay \$100 extra if the breeder can show to him that the colt will stop short in his tracks at the word; for he sees that amid even the average risks and hazzards of driving, such a power over the animal may prove of supreme importance.—Ex.

A HANCE & SON.—These popular nurserymen, of Red Bank, New Jersey, have sent us ther catalogue and price list for this fall's trade.

Sagacity of the Shepherd Dog.

The following remarkable instance of the sagacity of colley dogs was related to the writer by Charles Hancock, Esq., the celebrated animal painter. Mr. Hancock said: "I was once staying with Lord Kinnaird, at his seat in Scotland, when his lordship expressed a wish that I should see some of his prize sheep fetched up as quickly as he could. The shepherd whistled, when a fine old sheep dog appeared before him, and seated on his hind-quarters, evidently awaited orders. What passed between the shepherd and dog I know not, but the faithful creature manifestly understood his instructions.

"Do you believe that the dog will bring the sheep to us out of your flock?" I asked.

"Wait awhile, and you will see," said his lordship.

"The dog now darted off toward the sheep, at the same time giving a significant bark, which immediately called forth two younger sheep dogs to join in the mission. Accustomed as I was to the remarkable colley dogs, I was amazed at what now took place. On one side of the hill was a river, on the other side a dense forest. One of the younger dogs, on arriving at the foot of the hill, turned to the left, while the other darted off to the right hand. The former stationed himself between the sheep and the river, while the latter stood between the sheep and the forest. The old dog now darted into the middle of the flock, when the sheep scampered right and left, but were kept at bay by the two watchers. The old dog speedily singled out the particular sheep desired, and in a few minutes the three dogs were driving them toward us.

"Within about an hour of receiving the instructions, the dogs brought the sheep up to the door of the mansion."

A COMING HORSE.—The promising horse Grafton trotted, on Wednesday last, on a three-quarter exercising track, a full mile in 2.174-the fastest half in 1.07. This is the greatest feat ever achieved on a three-quarter track. His performance is the more remarkable owing to the condition of the health in which the horse has been all the early part of the season. It is but recently that he was cured of a bad fistula on the withers. In fact, it was only nineteen days that he had been in harness since his recovery. Grafton was purchased last year by Mr. Robert Bonner, of this city. The exercise track on which he trotted last Wednesday is on Mr. Bonner's farm, near Tarrytown, and the horse carried thirty-four pounds overweight .- N, Y. Sun.

For the Maryland Farmer.

Influencing Offspring.

BY D. Z. EVANS, JR.

In the attempt to breed stock to a certain standard of excellence, whether it be particular breeds of thoroughbred horses, or thoroughbred cattle or sheep or swine, we are often nonplussed at the result. We lay down a certain rule or line which we reason out to our entire satisfaction, the result, in our mind's eye, being just exactly right. We then, on the strength of our conclusive reasoning with ourselves, attempt to obtain practical results as good as we had reasoned out. For instance; we take two animals, possessing the characteristics we wish to perpetuate. We, under certain favorable conditions, breed these animals and consider that in their union we will, in the offspring, combine all the good qualities of both parents. By some little error in our reasoning, we do not obtain all the good qualities and none of the bad, in the offspring, (for human judgment is not infallible,) but a co-mingling of the two, either one or the other predominating as were the conditions favorable to their reproduction. By the selection of the fittest, we can, of course, be sure of improvement, but it is next to impossible to follow any set rule in breeding, and expect to obtain unvarying results. In the matter of mating and breeding animals, whether thoroughbred or of ordinary breeding, there are very many things which will conflict with the establishment of any rule. There is ancestral influence, which most breeders give careful attention, as it deserves it. We cannot breed to a male and expect to have the offspring possess, invariably, the characteristics of the sire, for the young may revert in form or some other important characteristic to the grandsire or even to the great-grandsire. And there is still another matter of importance to be taken into account as having a very great influence, and that is the matter of food and feeding. Suitable food, and enough of it, to healthfully develop the system, will, if persisted in, in connection with proper management in other departments, result in improvement, while either extremes will be productive of no good-over-feeding often producing sterility, while under-feeding creates rapid degeneracy, especially with a breed of animals accustomed, for generations, to liberal allowances of proper, nutritive food. And yet, there is another point, generally only hinted at by the stock breeders. We all know that the first male used on a sow for the first time (or with any other animals the same rule holds good) influences all subsequent litters, in a greater or less degree (thought not no-

ticable) according to certain circumstances or conditions. This is attributable, by some readers, to the blood of the sow becoming impregnated with the first serving of the boar, and that it is in that way each subsequent litter is influenced. Be that as it may, I think that the mind (the brain, if you please) is also influenced, and perhaps it is the only thing influenced. I had a young Yorkshire sow which was served by a Yorkshire boar, throw one black pig (a fine, well-marked Berkshire.) I never knew a Berkshire cross, for eight generations, on either the dam's or sire's side, and the only way I can account for it, is the presence of a Berkshire boar, where the young sow could see him while she was in heat. The sow had never any litter before that, and had never been with the Berkshire boar, or where he could possibly get at her. All the other of her pigs were all-right, and their young did not show any signs of an admixture of blood. These are facts as stated, and I should like to hear from others on the same subject. It is, no doubt, an isolated case, though if it sometimes occurs we must consider the possibilities of it when planning any particular line of breeding, and risk but little variation from the results reasonably expected.

BRINE FOR BATHING THE FEET. OF HORSES .-A correspondent, writing to the Practical Farmer, in relation to the use of salt and lime for bathing the feet of horses, says: I have tried strong brine on foundered or hoof-bound horses, and with good results. I made a solution of salt, and applied it three times a day by washing the legs and pouring upon the bottom of the feet, and holding them up a few minutes to let it strike in. I saw the wonderful effects in a few days. I account for it in this way: Salt will extract moisture from the atmosphere, which keep the feet moist. Salt operates nearly like grease upon the foot. The hoof becomes soft, yet pliable. Like a chunk of wood saturated with salt or brine, it is tough yet moist. Thus it is with a horse's foot. Here let me add that the practice of rasping a cracked hoof to toughen it is all folly. Apply brine, and you will effect a cure. A horse that is driven upon a hard road is liable to get stiffened. I have seen valuable horses driven upon our own plank roads a few days get quite lame. I reasoned to myself as to cause, and adopted the use of brine as a remedy, which proved effectual.

PRESIDENT W. S. CLARK, of Amherst Agricultural College, Massachusetts, has been granted a leave of absence for a year, and will go to Japan to establish there an agricultural college after the pattern of Amherst.

The Sagacity of the Horse.

A correspondent of the London Agricultural Gazette tells a good story of a horse trade in North Lancashire. Not long ago a gentleman asked a friend, a retired farmer, to go with him to look at a horse he thought of buying. A dispute arose among the parties with regard to the age of the animal. The owner protested that the age he had given was correct—he had had him so many years, and he bought him from the breeder. "You did no such thing," said the farmer; "if I am not mistaken, I bred the horse myself."

An altercation followed; each side was positive, and the buyer was on the horns of a dilemma. At length the farmer settled it thus: "You say the horse is so old-I say he is five years older; you ask £50 for him-I say £30 is enough. I will wager a £5 note that I prove the correctness of my argument, and on the result the price shall depend. Let the horse be taken into the yard of my late farm; let the harness be taken from off him, and if he does not at once, without any direction, go into No. 3 stall in the stable I will previously point out, then I will forfeit the £5, and you shall have £50 for the horse. If he does as I say, then you sell him for £30, and lose your bet of £5."-The dealer was in a corner, but he could not find any pretext for declining the challenge. The horse was taken to the farm yard (the stable was not visible from the part where he was unharnessed) and as soon as the gear was taken off he gave himself a shake, trotted around a corner of the yard, went direct to No. 3 stall, and was apparently quite at home in his new-old quarters. The sequel was that the buyer obtained his horse at a fair value, the farmer got his £5, and the biter was well bit.

THE SLOPS.—How common it is for the kitchen authorities in a farm house to throw the slops upon the ground, just outside the kitchen door, and perhaps within six feet of the well. I have known of a boarding house epidemic of diarrhea, which could be traced to no other source than the contamination of the well water by a shallow pool of sun-exposed, foul-smelling slops. A cemented cistern should be built about 75 or 100 feet from the house, and at a distance from the well, and to this all the kitchen slops, vegetable waste, &c., should be conducted through a suitable pipe or conduit. From the cistern these matters may be fed to the pigs, or thrown upon the ground at a proper distance from the house.—Cor. N. Y. Tribune.

Col. Robt. Beverley, of Fauquier, lately purchased a farm in tide-water Virginia, with corn enough on it to nearly pay for the cost of the farm.

Sheep Sales.

The following sales, reported in the Kentucky Live Slock Journal, shows an increased interest in fine sheep in Kentucky:

At a public sale of Cotswolds by Messrs. Warnock & Megibben, of Harrison County, and J. W. Allison, of Bourbon, at the farm of Mr. Megibben, near Cynthiana, Kentucky, August 31st, the following prices were paid:

64 ewes, average per head,	\$18	55
27 ewe lambs,	ΙI	50
41 bucks,	36	25
32 buck lambs,	ΙI	75

Highest priced bucks purchased by Mr. Gordon, of Indiana, for \$200; D. S. Coleman & Son, Fayette County, buck, \$200; 2d, James Williams, Clark County, \$185; and 3d, John Sillman, of Bourbon, \$145. The highest priced ewe was sold to Buckner Woolford, of Bourbon, for \$60.

Sale of sheep, the property of F. Gano Hill, Centreville, Kentucky, August 30:

106 Cotswold ewes, \$1	943	50
21 Cotswold ewe lambs,	269	00
35 Cotswold bucks,	735	00
19 Cotswold buck lambs,	170	00
3 Liecester ewes,	45	CO
11 Shropshire, Down ewes,	251	00
4 Shropshire-Down bucks,	78	00
16 South-Down ewes	268	50
9 South-Down buck lambs,	134	50
224 head, average.	17	00

The English Mechanic, a London paper, says the importation of fresh meat from the United States is an established success. It has been carried on throughout the hot weather, the meat reaching this country in good condition, and selling well; in fact, most of it goes in the Westend districts. On one day in the middle of August no fewer than 1,300 quarters were sold.

DEATH OF HENRY S. RANDALL. — The Hon. Henry S. Randall, LL. D., for many years editor of the Sheep Husbandry Department of the Rural New Yorker, died at his late residence in Cortland Village, New York, on the 14th Sept., in his sixty-sixth year. This announcement will pain many Rural readers throughout the country, by whom the deceased was esteemed as a man of ability, honor and unswerving integrity.

MARYLAND FARMER.—The October number of this reliable magazine, like its predecessors comes fully up to the high standard established for it, by able and enterprising editors. The FARMER invariably treats all subjects relating to agriculture in an interesting and practical manner.—Rockville Advocate.

THE DAIRY.



For the Maryland Farmer.

Butter Making in the Northwest.

I have been engaged here for several weeks in constructing a large butter dairy, near Byron, in Ogle County, Illinois. The capacity of the building is to adapt it to manipulating the milk of 800 cows. I am building it strictly on the plan of my Gulf Stream, Subteraneanly Ventilated Dairy, so satisfactory in the East. I find a great demand for my system here. There are said to be over 50,000 cows in Kane, Lake and McHenry Counties in this State.

In the manufacture of butter here, I find that the average amount of milk required to make a pound of butter is about 23 lbs. when the external temperature is favorable, but there is about 90 days of the milking season, taking one year with another, that with the best dairy houses here used, and in the most skillful management, it requires an average of 30 lbs. of milk for a pound of butter.

I expect to be able with my new arrangement to reduce the amount of milk required for making a pound of butter to the mininum as above given, throughout the season.

If I succeed in running the average of my daries at 23 lbs. of milk to the pound of butter, and the dairymen in the three counties mentioned, all adapt my system, it will be seen that I will effect a total annual saving, in that small portion of that State, alone, of 1,369,565 lbs. of butter, which at 25 cents per pound, amount to \$244,057.62.

I have submitted these figures to some of the oldest and best dairymen here, and they endorse it, and say that the estimate is a fair one.

Granting that I am able to effect what I have claimed, and my system is generally practiced throughout the butter dairy districts of the United States, the aggregate saving to this numerous class of producers will amount to many millions of dollars annually. A number of the most extensive butter makers of this State and Wisconsin are anxiously waiting to see the result of my system at

"Rose Hill Dairy," and, if successful, they say they cannot afford to do without it.

The result will be known in a few months, and if as successful as it has been in the East, a very marked and profitable change will be wrought in the butter production of the districts adopting this new and original mode of cooling and ventilating dairy houses.

And, if the market value of the butter made is enhanced as that made by my system has been in the East, which has been from 30 to 50 per cent., the advantage of my system will be still greater and almost incalculable.

J. WILKINSON. Byron, Ogle County, Illinois, Sept. 12, 1877.

Peculiar Features of Milk.

It is well known that the specific gravity of milk from different cows varies, and this can be readily understood, since there is a great variance in the quality of milk yielded by different cows. But a rather singular feature in respect to milk is that recorded by the well-known chemist, Mr. J. A. Wanklin, member of the Royal Bavarian Academy of Sciences. Wishing to note the difference, if any, in the specific gravity of milk drawn from different parts of the bag of the same cow and at the same time, he selected cows in a dairy that were well cared for and fed on meal, clover and other food calculated to give a good quality of milk. The milk was drawn directly into the sample bottles from each quarter of the udder, and on carefully testing them to determine the specific gravity, at a temperature of 60 degrees Fahrenheit, the samples gave the following: Milk from the right side front quarter exhibited a specific gravity of 1020.4, while the left side front quarter gave milk having a specific gravity of 1021.3. On testing the samples of milk from the hind quarters of the udder, the right hind quarter gave milk, the specific gravity of which was 1023.0, and the left hind quarter 1023.5.

Another sample of milk, the specific gravity of which was taken on the same day it was milked, at 60 degrees Fahrenheit, was 1020.4, while two days later the same milk showed the specific gravity of 1030.2. The experimenter says: "From the whole course of our experiments, it appears that the first change which milk experiences is a contraction.—specific gravity 1020 becomes specific gravity 1030. The next change is expansion, and this occupies some days, which is manifested by the specific gravity sometimes falling below 1000." These experiments show that there are some curious features about milk, and that there is ample room yet for investigation.—Rural New Yorker.

Milk in Cities.

A sprightly correspondent in the New York Herald, gives the following about the milk sold in Providence, R. I.

THE MILKY WAY .- The City Inspector of Milk, Mr. Henry W. Vaughan, reports that at the present time the milk supplied to the city is probably as good, if not better, than that obtained in any city of the size in the country. The hard times, in lessening the demand for milk, has tended to put the business more in the hands of small dealers, and to lessen the temptations the larger dealers have to adulterate. The Inspector drives out through the city frequently, stops the milk dealers and samples their milk. The penalty of adulterating milk with water is not less than \$20 or more than \$100, and in addition to the fine the party convicted has his name advertised. The new law prohibiting the sale of skimmed milk, under a penalty of \$20 for the first offence, has had a good effect. Dealers used to "top" their milk, that is, take off the top and sell it to ice cream manufacturers and others, and then get full price for the residue. The common adulterations are water, burnt sugar, to give cream a rich color, and salt, to raise the specific gravity. Few instances have occurred where other adulterations were used. The dealers in milk have to register every year at the Inspector's office, and take out a license between the 1st of February and the 1st of March; and this annual registration is of importance in keeping a correct record of the dealers actually in the business. At present there are registered 372 wholesale dealers, and 743 retail, or 1,145 in all who are engaged in the milky way. Nearly 3,000,000 gallons of milk are annually brought into the city, an average of over 7,000 gallons per day; and the annual cost at 7 cents per quart is about \$800,000, or \$2,000 a day. Should this milk be watered 10 per cent., which is a small and not readily discovered adulteration, the city would pay \$80,000 for the water. The larger part of the milk brought to the city comes from our own State, although the tendency is to go further each year for a supply. The largest amount comes by special car over the Hartford, Providence & Fishkill Railroad. This car is run by twelve wholesale dealers, who bring in daily about 500 cans in winter and 800 in summer .-Milk also is brought here over the other railroads in considerable quantity. There are many small farmers engaged in the business, and this tends to keep the price down. The traffic is regulated in an admirable manner by the Inspector, who keeps a sharp lookout for adulterations, and in consequence families generally are supplied with a fair, average quality of milk.

The Price of Cows for Forty Years.

William Sheldon, of Upper Providence, well known as one of the most extensive dealers in Montgomery County, Pennsylvania, says that previous to 1835, and during that year, good cows could be bought from \$18 to \$24. From 1835 to 1836 the average price was \$20. In 1837 to 1838, \$53. In 1837 the average was \$39 per head; in 1840, average \$30; with a dull trade during 1841, the average price went down to \$19, at which price the market stood the two following years of 1841 and 1842; in 1843 there was a slight raise, the average going up to \$22; in the next year there was a raise of about \$1, the price being \$23 per head; in 1846, \$24 per head; in 1847 and 1848, \$22 to \$25; in 1849, 1850, 1851 and 1822, the average \$26; in 1853 the average was the same, but the market not so strong; in 1854 the average was \$28; the highest price was \$40 and the lowest \$22 and \$23. In 1855 and 1856 the average was \$30. In the spring of 1857 the market was excitable, and the average for the year reached \$34, but prices went down very low at the end of the season. In 1858 and 1859 the market was low and hard, averaging \$29. In 1860 and 1861 good lots brought \$35 per head. During the next three years good prices were obtained, the average being about \$65 per head; some good lots averaged over \$100. Since then the markets have been high, and drovers have done well. Just now there is a downward tendency, and the prospect is that prices will continue to decline for some time .- Media Democrat.

CARDING Cows.—Most farmers, (or many, and we would like to say all,) keep curry-combs, cards, brushes, and the like in a horse barn, and use them daily, but how many cows throughout the country ever had a card applied to their dirty sides? The dirty cows come out of the stable in the spring looking more filthy than the swine in the gutter.—Does it not pay to keep the cattle clean? Ask any intelligent farmer if it pays to use the brush on his horses, and then ask him to point out a reason why it does not pay equally well to give the cows the same attention and care.

LARGE SHIPMENTS OF CATTLE.—Nine car-loads of cattle, containing 194 head, and one car-load of sheep, were unloaded at the depot at this place, on Monday morning of last week. They belonged to Mr. —— Adams, of Loudoun County, Va.

W. W. Webb, Esq., Lunenburg C. H., Virginia, sold a farm to an immigrant who made enough money out of his tobacco crop the first year to pay for it.—Spirit of Jefferson.

The Poultry House.



For the Maryland Farmer.

Poultry for Farmers.

BY W. ATLEE BURPEE.

The average farmer of our country regards poultry as a necessary evil—producing a few eggs and occasionally a "broiler," but consuming many times the value thereof.

That such is the case with the usual stock of "dunghills," kept in the usual slip-shod manner, no one doubts. That such is due only to the folly and short-sightedness of the owner is equally true. As poultry is ordinarily kept they cannot be expected to "shell out" abundantly at any time, and especially in winter, when nature furnishes no supply of animal food. To keep poultry in profit there must be especial attention paid to the breed. If fowls for market are desired, breeders should be selectted that combine large size, early maturity, plump breasts, juicy fiesh and yellow legs.

If eggs are desired, then only prolifickness and non-setting qualities should be sought. Much can be done by selection with the common barn yard fowls. Form in your own minds a thorough understanding and distinct picture of the fowls you wish-select and breed only from those nearest to the desired standard. Size is inherited mostly from the hens. If you wish large size and good laying qualities, breed from a cock of extra prolific stock -no matter if he is rather small-and hens of extra large size. In selecting hens for size, no influence upon the offspring is gained by a super-abundance of fat. On the contrary, much harm is thus done by impairing the breeding qualities. Select hens of large form, heavy bone and capability to fatten.

One of our farmers followed a judicious course of selection of mongrel fowls until he had, after a number of years, established a distinct type (color excepted-that not being considered) and was able to sell his surplus stock for breeders at \$5 per pair, besides raising the earliest and finest fowls for market. Another woman, living near one of our stock yards, in Chester County, Pennsylvania, who depends upon her poultry for a sustinance, raises every year hundreds of fowls of extra fine form and size, and remarkably uniform in markings, all of which are of her own selection and producing. This shows what persistent effort can do. But as many fanciers and breeders, for years before them, have made the selection and breeding of fowls to a fixed type a life study, it will pay much better to take advantage of their efforts by investing ten or fifteen dollors in a trio of first class thoroughbred fowls of the breed best adapted to the breeder's

Where eggs are desired, select the variety you most fancy, if either Leghorns or Hamburgs.— They will produce twice as many eggs as mongrel stock. For large size Cochins or Brahmas—espepecially Dark or Light Brahmas. For market fowls or eggs, for general farmers' use, Plymouth Rocks or Dorkings. A very excellent cross can be made with a Leghorn cock and Dorking hens—superb table fowls and good layers will be the result. A Leghorn with Asiatic hens will make fowls of large size, fine laying qualities, and not troubled by that morbid propensity to sit, so common to all the "Shanghai" race. In future articles we will speak more fully of breeds and breeding.

Philadelphia, Pa., September, 1876.

To CHOOSE POULTRY .- Young, plump and well fed, but not too fat poultry are the best. The skin should be always finely grained, clear and white, the breast full fleshed and broad, the legs very smooth, the toes very pliable and easy to break when bent backwards; the birds must also be heavy in proportion to their size. This applies to fowls and to pigs. As regards ducks and geese, their breasts must also be very plump, their feet flexible and yellow; when they are red and hard, and the bills of the same color, the skin full of hairs and and coarse, the birds are old. For broiling, white legged poultry must be chosen, because when dressed their appearance is by far more delicate; but dark legged ones are more juicy, and of better flavor when roasted.

To Young Men.—Now is a good time for those out of employment to busy themselves in getting subscribers for our paper,

THE APIARY.



Bee-Keeping-Profits and Risk.

Bee-keeping is as sate as any farmers' investments. Then as to profits. I would like to have any one show me the legitimate business that will uniformly double and treble and quadruple the amount invested, as bee-keeping is proved to do by actual statistics. Another objection: There is no cash market for bee products in any great quantities. Is that so? Adam Grimm, of Wisconsin. and Mr. Quinby, of New York, both recently deceased, kept 1,500 hives each for many years, and put honey into the market by the ton, never failed of selling for cash, all in a lump, to say nothing of the thousands of men, and women too, in Michigan, Minnesota, Wisconsin and Ohio, who raise from 500 to 10,000 pounds every year. Ask Mr. Harbison, of Californie, and many others in that State, who raise honey by the ton, and send it off to the great markets by the car load, if they ever failed to sell for cash and big prices? Extracted honey is sometimes a drug in market. Nice white comb honey, in section or glass boxes, always sells quick to wholesale dealers, at an average price of 25 cents per pound .- West. Agriculturist.

HORSES STUNG TO DEATH .- JERSEY CITY, August 26 .- A pair of horses valued at \$400. belonging to Dr. Webb, of Boonton, New Jersey, were attacked by bees a few days ago, and were so fearfully stung that they died. The day was very warm, and the animals perspired profusely. On passing by six or seven hives, it is supposed the odor from the horses offended the bees, for they attacked the animal in swarms. The driver tried to unhitch the horses, but was unable to do so in consequence of their plunging and kicking. He then went for assistance, and returned with long gloves his hands, and his head covered with several folds on of musquito netting. He had to scrape the bees from the horses with his hands, and finally got the horses away, but subsequently they died. The rage of the bees still continued, and on the following day they attacked their owner's house, and the family were compelled to vacate.

Hiving Swarms.

In large apiaries, and where natural swarming is practiced, every bee-keeper knows how important it is to get swarms hived as quickly as possible, to prevent several swarms from going into one mass,

I practice as follows: All my swarms are caught in peach baskets on the end of a pole. Take a basket and bore the bottom all full of inch holes, and cut away quite a good portion of the staves, so as to make it as open as possible; stick the inside full all around on the staves with small strips of comb, a leather strap, six or seven inches long, put through the bottom of the basket and nailed on the inside, with a small harness snap on the other end of the strap. Then fasten to the end of the pole, a ring, snap into the ring and your basket hangs in the form of a bell. Take a light pole, with hook on the end, and you have all that is required.

We suppose your hives are already just where you want them to stand, ready to receive the swarm, some brood combs having been put in the hive .-Now, then, this hive has a cover to cap after the fashion of a band-box. Just as the swarm is on the wing, and they have selected a lighting place, take the basket in one hand, hook in the other, and when about a quart has settled to the tree, shake with hook and put basket in the spot. Just as soon as the bees begin to gather on the basket, lower the basket about a foot or so, and keep the branch shaking with the hook, and in less than five minutes, you have them all on the basket. Now carry to the hive, and one jerk will drop them on top of the frame. Put on the cover, and your swarm is hived and out of the way, and not a score of bees will take wing after they are put in. Toward evening you must put them in whatever shape you want them. If for a honey stock, fill them up with combs and brood, and put on boxes .- J. Butler, in American Bee Journal.

A naturalist asks: "Do bees hear?" We don't think they do. At any rate, when a man is chased by a bee across a ten-acre field, and at the top of his voice urges his pursuer to "Shoo, there!" the insect pays no attention whatever to his remarks. Norristown Herald.

Honey and Kisses.

To heal the wound a bee had made Upon my Nellle's face, Its honey to the part she laid, And bade me kiss the place.

Pleased I obeyed, and from the wound Sucked both the sweet and smart; The honey on my lip I found— But the sting went in my heart.

HORTICULTURE.

Blight of the Pear Tree.

A Microscopic Examination and its results.

BY PROF. J. BRAINERD.

So far as I am able to learn, there is no settled theory in regard to the cause of the Pear Tree Blight, and to my mind, the discussion of subjects, not definitely established, accords perfectly with the ruling spirit of this Association, and when they are carefully considered, can scarcely fail of some good results.

If our extreme modesty forbids the approach of such subjects, may it not be said that we fall short in the first and foremost object for which we are associated.

In order to comprehend the full significance of these observations, it will be necessary to call to mind some facts regarding the structure of plants and trees, and the phemomenon of the circulation of the sap.

In what is called sap-wood, there is laid up in store, soluble matter, destined to contribute to the future development of the tree. This is clearly shown in the sugar maple, (acer sacharinum,) and a knowledge of this fact is made available for obtaining a delicious sweet.

Sap is essentially a watery fluid, which the roots absorb from the earth, and contains or holds in solution a minute quantity of carbonic acid and ammonia and a few mineral constituents, drawn from the soil in a condition of solution in water.

In its ascending course, through the cells of the sap-wood, it meets with and dissolves a portion of the soluble cell-contents, and thus becomes more and more dense as it approaches the bud where it is appropriated to the development of the leaf, in which it undergoes a furthur elaboration and returns upon the outside of the sab-wood, to form a new growth, and in this condition is called albur-

In "Rhind's Vegetable Kingdom," this matter of sap circulation is fully examined; in this and other standard works on botany, the fact, that the ascending sap, in exogenous trees passes upward through the growth of the previous years (hence called the sap-wood) is so universally admitted that its discussion here would be out of place.

the succeeding year. And this sap-wood may con tinue in activity for a number of years, and until the cells which form its structure, become filled with mineral deposits, thereby becoming heartwood and of no further use, so far as the vitality of the tree is concerned. It is, however, of value in giving strength to sustain the accumulating weight of the growth, but the vitality of the tree would not be affected by its removal.

Before I call attention to the sketches I have made, from microscopic examinations of the specimens submitted for that purpose, at the August meeting, and since procured, it will be proper to examine, briefly, the anotomy of the growth under consideration.

The sap-wood is made up essentially of elongated cells, either joined end to end, or overlapping each other. During the growing season these cells are filled with crude sap of constantly increasing density from the spongiole of the root, where it is little else than water, to the extremity of the highest leaf.

In the leaf system it becomes elaborated sap, fitted for the formation, in its descent, of a system of new cells between the bark and the last year's growth, and which, when in the act of forming, is called alburnum, as before srated.

It is owing to the extreme delicacy and tenderness of these forming cells in the spring of the year that we, in our boyhood days, were enabled to make our "toy whistle of bark."

I will now call your attention to the possible causes of Blight, and proceed to examine the sketches I have made from actual views under the microscope.

In an English work on "Practical and Scientific Fruit Culture, by Charles R. Baker," pages 420, 421, we find this significant statement: "That the enlargement of the flesh of a fruit, the entire or partial absence of seeds, are the result of disease, strictly considered; and yet, these conditions are very desirable in fruit culture."

What we are to understand by the term disease, in this statement, must be held to relate wholly to the vitality of the tree, for it is a well-known fact, that in fruits, as well as in animals, an excessive development in any particular direction-the fostering of favorite qualities-weakens the power of The alburnum, then, is the layer or growth of resistance against the vicissitudes of climate, and the present year, that will form the sap-wood of the numerous natural fees to longevity, producing

what may properly be termed, an anamic condi-the Pear Blight Beetle, scolytus pyri. This insect, tion of the tree.

When I entered upon this examination, I was inclined to attribute the Blight to the depredations sembles the common pear tree blight. of some species of insects, but I determined to conduct the investigation without bias; I could not, however, pass over this point without due consideration.

of this character, but found none, with the excepin which appeared slight evidences of the work of dies.

which is very small, causes a blight of spurs and small twigs, which, in its outward appearance, re-

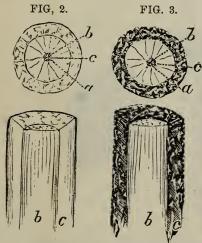
The limbs or spurs attacked turn black and die, while other parts of the tree remain healthy. The egg of the insect is laid in the axil of the bud; the larva eats its way inward through the alburnum, I, therefore, made dilligent search for evidences and forms a circular passage in the sap-wood, thus cutting off the vessels for the ascending sap; the tion of two or three spurs in perhaps fifty examined, whole part above, being deprived of nutriment,



Natural size—sound branch, and same blighted.

I am satisfied, from a most careful examination, that the kind of blight, under investigation, is not caused by this or any other insect, for I failed to find either the grub or the conditions above stated.

Since writing the foregoing paragraph, I have succeeded in finding the living larva of two individual specimens of scolytus pyri. The branches had been in my possession about ten or twelve days. At this stage of their development, their length is about one-tenth of an inch, a reddish brown head, two short hooked mandibles, dark eyes, large thorax, fifteen articulations, two or three stiff hairs upon the sides at each articulation, body very light straw color, almost white, and semitransparent. The point where the larva entered the bark is scarcely perceptible, without a magnifying glass, appearing not larger than a puncture made with the point of a needle. Their course first inward, towards the pith from the base of the spurs; thence downwards along that soft tissue .-The discovery of these living larva should not be taken as evidence of a cause of the blight, inasmuch as their development was subsequent to the blight.



Not blighted. Blighted branch. Both magnified two diameters.

That the egg of the insect was deposited previous to, or about the time of the occurrence of the blight, is quite probable, but the tree had sustained no injury from the larva at that time.

We must, therefore, look for other causes, and in doing this, we can have no more reliable guide than the revelations of the microscope.

I next turned my attention to the discovery, if possible, of a *fungoid* growth, by many regarded as the cause of blight. But, upon the closest scrutiny, no evidence of this character appeared. I am,

therefore, forced to the conclusion that fungus, whenever it does appear, is the consequence, and not the cause of blight.

I now call your attention to the microscopic views which I have prepared with scrupilous fidelity, to the specimens before me.

Figure one shows a healthy and a blighted branch.

Figure two shows cross and longitudinal sections of the healthy branch magnified.

Figure three shows a like view from a blighted branch.

Figure four shows a slightly magnified branch twenty-four hours previous to examination. The entire growth, above the blighted portion, was green and vigorous, showing a continuous supply of ascending sap, while the bark and alburnum in the blighted portion was dark and withered.

Figure five shows magnified vertical sections of healthy and blighted branches.

Figure six shows magnified views of stomata, in the green bark of the young shoot, both natural and blighted, with cross section of the same.

In these examinations, but one conclusion can be entertained, and that is, that the newly formed cells in the alburnum have, from some cause, been ruptured, and the elaborated sap, destined for the support of the fruit and the perfecting of the new growth of wood, poured out into the interspaces of the cells, coagulated and disorganized, producing in the vegetable tissue, a condition analagous to what is termed extravasation of blood in the animal tissue.

A comparison of the healthy alburnum, with that struck with the blight, shows most clearly that this statement is fully borne out by the facts in the case.

The microscopic appearance of the coagulated sap in the blighted portions of the stem, under a high magnifying power, was most remarkable.

Every vestige of cell formation was destroyed, and nothing could be seen but a dark coagulated mass pushed out in rough masses through fissures in the bark; and this appearance extended through the whole thickness of the alburnum, while the sapwood remained in a perfectly healthy state; conveying sap to the unblighted portions above, as seen in figure four. The color of this coagulated sap presented all shades, from a pearly lustre to a dark brown, presenting many irregularities and cavities, caused by contraction from loss of watery fluid.

The external bark and leaves appeared as though they had been scorched in a fire, hence the disease is aptly called "Fire Blight."

There are two causes that produce the rupture

and destruction of newly formed cells in the alburnum, and the action is very sudden and certain .-These are extremes of heat and cold. In the spring of 1875, in Ohio and along the Lake shore fruit region, after the trees had put forth their leaves, a sudden fall of temperature from summer heat, from 12 to 15 degrees below freezing, killed outright nearly every pear tree in that extensive fruit district.

I examined many trees soon thereafter, and found the external appearances exactly similar to what is called the fire blight, that is, the trees had the appearance of having been roasted in an oven.

The green and tender portions of the tree, especially the alburnum, are made up of cells whose membranous walls are very thin and delicate, and when the sap, with which these cells are always mean of which is 70 degrees.

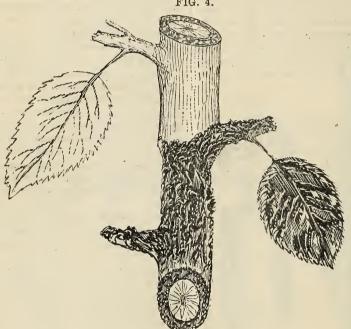
filled, is subjected to sudden expansion, from either high or low temperature, the cell-walls become ruptured, and the sap, of course, runs out and is diffused among the tissues, and its nutritive action is lost. "

A putrefactive condition soon followed, giving rise to fungoid growth, if other conditions are favorable.

In order to test thoroughly the influence of heat, I subjected a vigorous and healthy branch of a pear tree to an artificial heat of 108 degrees Fah. for twenty minutes. The effect upon the leaves and soft tissues was exactly like that of the natural

The normal heat for the fruit producing season ranges from 65 degrees to 85 degrees Fah., the





Blighted branch, showing healthy sap-wood, giving sap to upper branches.

A temperature of 95 degrees is dangerous, and 100 degrees to 108 degrees is disastrous.

A curious fact has been observed, and thus far not accounted for, and that is, the tendency of the blight to go in streaks through the orchard or nursery, sometimes being confined to a belt of a few feet in diameter, and the coarse of the blasting current of hot air is generally at right angles with the direct rays of the sun.

For example, if the injury is sustained in the afternoon, the direction of the wave will be from north of west to south of east,-(Baker.)

The alburnum or forming wood being made up of cells exactly like those of the sap-wood, but tender and delicate in structure, when becoming gorged with sap from excessively favorable conditions of growth, possess not the power to resist the pressure of the expanding sap under an almost tropical solar heat, oftentimes increased in intensity by the situation of the ground.

From careful observation and inquiry, I have found that orchards, or single trees, upon a southern exposure are much more liable to the blight than those on northern exposures.

As corroborative of this, I will state that I have seventy-five pear trees in Prince George's County, Maryland—(Duchess and Bartlett)—now six years old, on a northern exposure: none of them are blighted.

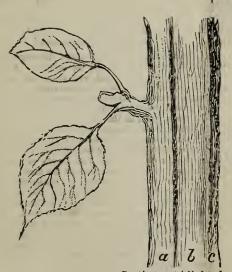
Dr. Palmer, of this city, has an orchard of about forty pear trees, about two miles north of the boundary line, on the Bladensburg road, on a northern exposure, and no blight has touched them, while half a dozen trees on a southern slope of land, upon the same farm, have been completely destroyed by the blight.

Dr. Breed had pear trees on a southern aspect, and they were all affected with the blight. He removed them to ground sloping toward the north, and they soon became healthy, fruitful, and no blight has since touched them.

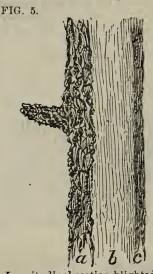
Newton Crawford, Esq., of Bladensburg, has pear trees on ground facing the south; they are all ruined this year by the blight.

Mr. Throckmorton, of Virginia, about the tenth of August, brought me branches of a pear tree, in full bearing, which had been planted in a hollow left in leveling an old fort, where it was exposed to excessive heat, with water standing about its roots, after a heavy rain. The tree flourished in the early part of the season, and on the first week in August was in a fine condition and full of fruit. It was struck with blight on one of the hottest days, about the 8th of the month, and in two days was completely withered. Other pear trees of the same age, standing on the northern side of the hill, remain in full vigor to this day.

Besides these instances, many others might be



Section not blighted; 8 diameters.



Longitudinal section blighted.

given, extending over a wide range of country, but these, it must be admitted, tend strongly to confirm our theory.

By reference to "Rhind's Vegetable Kingdom," it will be seen that the pear tree is indigenous to the northern sections of the Temperate Zone, flourishing in its native forests, as far north as 57 degrees of latitude.

They seem to delight in a northern aspect, or at least they are most hardy and long-lived when growing in positions where they are protected from intense solar heat.

In attempting to acclimate it to a warmer climate, its primitive habits should be regarded, and situations selected for its growth, that will most promote its successful cultivation.

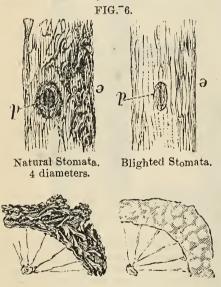
In the culture of fruit of any kind, that is subject to maladies, and especially to fatal ones, which so often blast the hopes of the fruit grower, it should be the first object to discover the cause, and then there is a better prospect of being able to find and apply a remedy.

It is undoubtedly true, that grafting upon seedling stocks, raised from the seeds of highly cultivated fruit, greatly weakens the vitality of the tree; that is, the stock is feeble, and the roots do not strike vigorously into the soil, and when, by reason of the excessive demand for material to supply the requisite pabulum for the development of the choiest fruit, the roots soon become inadequate to furnish that supply, and a failure is the inevitable consequence; and besides a sickly tree, although planted in a favorable situation, is much less able to withstand the attack of an enemy than one in vigorous health.

Another evil we have to contend with, is deep cultivation around the roots of the growing tree.

The roots of the pear tree, especially those highly cultivated, run near the surface of the ground. Deep plowing around the trees cuts off the roots that supply nourishment.

In a recent conversation with Mr. Munsell, a successful fruit grower of Chardon, Ohio, I learned that he has greatly improved his pear trees, smitten with the blight, by carefully digging about the roots, taking care not to injure them, and mulching with mineral coal ashes and broken bones, mixed with good soil, at the same time, digging a deep trench around the trees at the extremity of the roots, for the purpose of drainage and filling it with broken bones and coal ashes. Trees thus treated become healthy and fruitful.



Their situation was on high ground, nearly level, clay soil; the general slope of the land north, toward Lake Erie.

Fruit trees to become vigorous and fruitful, must have the conditions, soil and culture necessary to their successful development.

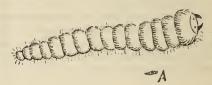
Neither the forming tissues of the wood, nor the substance of the fruit, can become perfect unless the carbon, hydrogen, nitrogen, sulphur, phosphorus, alkalies, and other elements, are liberally supplied to the roots in due proportions and conditions fitted for absorption.

To ensure a healthy growth and fruitage, and at the same time guard against the blight and other

diseases to which the pear tree is subject, certain sanitary measures must be observed.

The most important of these is situation. A north or north-east slope of land is the most favorable, all other things being equal, for the reason that the solar heat culminates an hour or two after meredian; usually from one to two o'clock in the afternoon.

FIG. 7.



Natural size.

Larvæ of the Scolytus Pyri, Magnified 20 diameters.

Deep cultivation and under drainage, before planting the trees, should be secured. For pear trees a deep loamy soil, with abundant moisture, but not an excess, is to be preferred. Top-dressing, with proper fertilizers, especially finely broken or ground limestone, should be freely used around the trees, as far as the roots extend.

Grafts from young, vigorous, bearing trees, should be set upon the native crab or thorn. This will secure a strong and healthy root-growth; thus securing a constant and full supply of food from the commissary department of the tree. A horse would not thrive if stabled in a quagmire, and fed only upon ferns and sedge grass. No amount of physic or grooming would supply his natural wants. He must have good conditions and food. So with pear trees. If they are unfavorably located in an insufficient soil, with an aspect inviting destruction by the blight, all the sulphur and lime baths, whale oil, soap suds washes and linseed oil liniments, that can be applied, will not save them.

All the therapeutic agents in the world will not bring to the tree the necessary conditions of health, prosperity and usefulness.

In conclusion, I will remark, that the evidences to my mind are conclusive, that the blight of the pear tree is causnd wholly by excessive solar heat, by which the tender and forming cells are ruptured, the elaborated sap poured out into the disorganized tissues—coagulated and dried, and consequently rendered unfit for the purposes of nutrition and growth.

tion and growth.

And I believe that it will be found, upon further investigation, that the sections of the branches smitten have not been protected by foliage from the direct rays of the sun, while portions above the affected part, protected by leaves, have not been injured, but necessarily soon die from secondary causes.

If this hypothesis of Pear Tree Blight be the true one, and the accumulating evidence assuredly does point in that direction, then the remedy for this great evil must be sought, not in external applications to the injured parts, nor even by excision, but by planting in suitable soil, and in situations that will afford protection form the devouring heat

POTOMAC FRUIT GROWERS.

OCTOBER MEETING.

We extract from the Washington Weekly Star the following abstract of the proceedings of this Associa-

following abstract of the proceedings of this Association.

This association held its October meeting at the rooms or the Board of Trade, Washington, D., on the 3d ulto, with Judge J. H. Gray, president, in the chair, and Dr. J. E. Snodgrass as secretary.

Several communications were read, and reports by the secretary and president were made in regard to their exhibition at the entennial.

The secretary closes his report by saying that it had been his intention to report also as a delegate from the r. F. G. A. to the U. S. Agricultural Congress, which impressed him very favorably; and also as to the American "Association of Foresters," which he attended, and the displays of the Pennsylvania Horticultural Society, and their closing fesival, and the Maryland Horticultural Society, to whose invitations he had responded.

The president followed the servetary with some suppl mentary statements. He certainly appreciated, he said, the complimentary allusions of his official associa e to what he had tried to do, co-operatively, toward insuring a creditable exhibit of the fruits of their own section. He repared to Philadelphia in time to be on hand at the grand opening day for fruits, and hurriedly plated and labeled his own and other fruits put in his charge by some of his neighbors.

Mr. Wm. Saunders defended the management at

own and other fruits put in his charge by some of his neighbors.

Mr. Wm. Saunders defended the management at Philadelphia. Judge Gray had complained that the time appointed for the opening was too late for the Southern fruit. But the Agricultural Bureau were ready at any time to receive fruit. Besides, it was not fair, he thought, to blame the Centennial management for what was so difficult to do as to suit the ripening season of every locality of territory, so broad and diversified as that which had to be provided for.

PEAR TREE BLIGHT

Vice-president, C. Gillingham, read a brief paper on this subject.
Secretary snodgrass also read a paper on the same subject, including an article printed some months ago in the Maryland Farmer.
He said—I have been lead to say this by some statements.

He said—I have been lead to say this by some statements bearing on the question of the cure of "pear tree blight," which is more important, of course, tuan the question of its cause, although the latter point ought not to be ignored, which have come to my notice through the excellent journal which our friend and long associate member. Col. Curtiss is now assisting to render useful. Two or three years ago, a paragraph went the rounds of the agricultural press, to the effect that a citizen of the State from which so large a proportion of our members hall, Virginia, in the person of Mayor Ludlow, of Norfolk, treated the "blight" successfully with tinseed cit.

A lively discussion followed, during which Col. H. Pitts said be thought they

HAD MADE SOME PROGRESS

by the discussion. He had, some time before, called attention to the solar-heat theory, and cited his experience in an orchard of his own as confirming it. He referred to an orchard of 1,700 pear trees, set out by J. Hoffman Smith, near 1 ort Stanton, as showing by its healtriness, the advantage of a western exposure in the main, the forest protection on its south side. As to remedies the following recipe, recommended by Mr. Vanhorn of Chicopee, Massachusetts, viz: Sulphur mix. d with neatsloot oil, and applied to the diseased part with a brush.

Col. D. S. Curtiss, who formerly had Col. Daniels' farm in charge, said that it had various exposures, and he thought that the particular varieties of pears cultivated in it, and also the nature of the soil had partly protected it. In the West, he had found great advantage in protecting his trees with wrappings of straw or oid rugs, and he had shielded them with boards, set upon the sunny side, to their safety. He explained the modus per and of the freezing and thawing processes, wherein, he urged, the mischief complained of would be undoubtedly found to lie chiefly. He recommended the encouragement of the growth of

LOW BRANCHES

in pear orchards as a partial protection to the trees against blight.

Dr. Howland, a visitor, desired to be informed as to whether blight appeared at any particular season of

whether original preates at any present the year.

Mr. Saunders—No. It is liable to occur at any time during the growing season. As to the application of oils, while he had listened with interest to Dr. S.'s paper and Col. Pitts' recipe, he would recommend caution in their use. Sulphur and time was his remedy, He would recommend charcoal dust for pear trees. It was a well-known protector. As to the cause of blight, he would have to say that he had seen its presence in seen its presence in

ALL CONCEIVABLE CONDITIONS

of orchards. When he had spoken of fungus or mildew, which he believed he was the first to call particular attention to in this country, he did not mean to assert that it led, but followed in the succession of effects to causes. He only knew that the fungoid condition belong to blighted trees.

The Hon. N. W. i erson said, as that seemed to be an experience meeting, he would give a fact for Dr. Brainerd's consideration. He had some pear trees, with a southern exposure, that died of blight. He planted vines among his trees thereafter, and iet them go without cultivation. His trees so treated did weil.

THE CENTENNIAL TO BE DISCUSSED.

THE CENTENNIAL TO BE DISCUSSED.

Mr. Brown moved the adoption of "the Centennial in its relation to fruit culture," as the subject for consideration at the November meeting, which was agreed to. Thereupon the chair made it his duty to point the proposed discussion with a paper on that subject.

GRAPE GROWING .- This is the title of a neat little volume, of some 300 pages, which we have just received from the publishers, A. L. Bancroft & Co., San Francisco, and written by T. T. Hyatt. It contains instructions for growing and packing grapes; of many varieties in different countries; of raisin making, and much other information, in which different operators, under various circumstances, will need to carefully discriminate, in making choice of modes of culture and of varieties of grapes; and we think it a useful book.

THE BUCKEYE AND HORSE CHESTNUT. - These (Aesculus) are both beautiful trees, and very desirable for the street, yard or park.

We had a conversation, recently, with Hon. T. C. Connally, of Washington, when he informed us that a few years ago, he planted some Buckeye (æscuiacea glabra) nuts in his yard near the house; one grew and is now a very handsome tree, from which, he has this fall gathered a goodiy number of nuts.-It is a rapid grower and is hand-ome in form and foliage. This is the Ohio variety, from the abundance of which that is called the "Buckeye" State. There is another and smaller variety, and more handsome, with red b ossoms, called Red Buckeye (æ. pavia) in Virginia, Kentucky, &c.

To SLEEP WELL.-If you wish to sleep well eat sparingly of early suppers. Avoid all arguments or contested sub?ects near night, as these are likely to have a bad effect upon one who is troubled with sleeplessness at night. Avoid having too much com-Many persons become so excited with the meeting of friends that sleep departs for a time.-There is probably nothing better, after cultivating a tranguil mind, than exercise in the open air. By observing these simple rules, sleeplessness in the majority of instances, may be wholly cured.

THE

MARYLAND FARMER, A STANDARD MAGAZINE.

EZRA WHITMAN,

Proprietor

S. SANDS MILLS, Conducting Editors.

W. W. W. BOWIE, Associate Editor.

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John Lee Carroll,
John Feast,
D. Z. Evans. Jr.
John F. Wolfinger,
Dr. J. E. Snodgrass,
Dr. Jehu Brainerd,

A NICE THING TO DO.

And everybody loves to do a nice thing—'specially the readers of the MARYLAND FARMER.

It will gratify us very much—them too—make us thankful and them happy, if they will all do it; and we feel confident they will do it—of course they will. O yes, we mean all of our subscribers will send in, before Christmas, the pay to renew their subscriptions, and a new one for their neighbors; it will be so nice; and then we can print so many nice things; 'nough said.

LAID OVER.—We have a number of valuable communications, on different subjects, which have to lay over to future numbers, on account of pressure of matters in regard to the centennial and county fairs. But those deferred articles are good reading for any month, and will be always in season.

FARMERS AND THE WAR.—There is now strong prospect of general and destructive wars throughout all or most of Europe, which will cause great demand for our bread-stuffs and meats. We are informed by English papers that already the prices of these commodities, particularly of grains and flour, have been considerably enhanced with a prospect of further rise in the prices, very soon.

Therefore, our farmers will find it to their advantage to provide as much wheat, corn and beef as possible for the Europeon markets; this country will be required to supply the greater portion of the demand, as the Baltic and other wheat countries will be blockaded, or otherwise prevented from supplying the usual amount of the necessaries. Hence, it will be wise for our farmers to plow and prepare as much land as possible this fall and winter, to be planted in corn, oats, potatoes and other crops next spring, it being now too late to sow wheat. In localities and soils that are suitable for it, Spring Wheat-"Canada Club," "Rio Grande," and some other varieties, can be sown next spring very early, say last of Febuary and first half of March. Export all the wheat you can and eat corn, oats and potatoes at home.

New Pears.—Ellwanger & Barry, of Mount Hope Nurseries, Rochester, New York, made one of the finest fruit shows at the Centennial. Among their pears were two new ones, the *Doctor Reeder* pear, and *Bonne de Puits d'Ansault*; the former, a late autumn variety, of high flavor and much promise, which originated in Seneca county, N. Y. and the latter, one of Leroy's seedlings, from Angers, in France, of peculiar and excellant quality, maturing in September and October, and which has received much attention since its recent introduction. Both are very productive pears.

Cordial Salutation.

We send this number of the MARYLAND FARMER free, to several old acquaintances, friends and others, hoping they will be so well pleased after reading as to subscribe for it.

Also, we send it to many post masters, as a specimen copy, trusting that they will like it well enough to recommend and solicit subscribers to it, and make 50 cents commission on each subscriber they send us at the regular price of \$1.50 per annum. Each new subscriber will receive the last three numbers of this year in addition to the volume for next year. Several specimen copies will be supplied to those who will take hold and earnestty canvass for subscriptions.

Those who will get up clubs of five or more, and send us five dollars, will receive a sixth copy free for the year.

Out of Employment.

We hear much complaint, from all parts of the country, of people—both men and women—out of work—they can't get employment by which to support themselves.

Undoubtedly, there is real grounds for much of this complaint; but much also of this want arises from so many refusing to do any thing unless they can get large wages; now, it is better to work for small wages, rather than do nothing, and be in want—running around in idleness; it is better to make one-half dollar rather than nothing; then make two, three, four or more half dollars soon as you can.

There are thousands of people in Maryland, Delaware, and other States, who want the MARYLAND FARMER, and who would take it if pleasantly solicited and shown a copy; and there are hundreds of men and women in those States, who have no work, who might make from one to three, four or five dollars per day by lively canvassing, through the country and cities to obtain subscribers and advertisements for this magazine; and we want 10,000 more subscribers and a dozen or two more pages of advertisements; and will allow liberal, handsome commissions to men and women who will do this work, of obtaining subscribers and advertisements.

On all paid subscriptions we allow the canvassers one-third of the price in commissions; and on advertisements we allow one-fourth, 25 per cent. commissions on our advertised rates; that is, the person who furnishes to us an advertisement worth \$4.00 will receive \$1.00; the person who gives us an advertisement worth \$12.00 will get \$3.00 of it, and so on, for more or less. Any one, not wishing to canvass, but who sends us \$5.00 for five subscribers, will have a sixth copy sent free. Any one already a subscriber, by sending us \$1.50 for a new one, will get his own the coming year for \$1.00

Any one getting one or more subscribers, among his acquaintances, can send us \$1.00, and keep 50 cents for his trouble on each one.

There is not a county in Maryland, Delaware or the Carolinas, that has not a thousand or more persons who need and can easily pay for the MARYLAND FARMER; and any active person, by lively and courteous canvassing could obtain an average of at least five subscriber a day—often more—from now till next March, and that would give him \$2.50 per day for wages; at fairs, at society meetings, and on court days many more than that number could be obtained; besides some advertisements could be obtained from business men.

Members of Societies and Granges can make

money in the same way, and do their people good at the same time; so there is no need of any respectable person being out of employment, if they desire to work.

To any one who wishes to go earnestly to work, in this business, and will furnish us with good references, we will supply plenty of specimen copies, and authority to canvass in any county or State desired.

The MARYLAND FARMER is certainly the best farmer's paper in this State, and has been longer published, without a month's cessation, than any other agricultural paper in the Southern States, and is, therefore, firmly established and most reliable.

Now is the time for young men and others to take hold and commence. Thoroughly work up one county first, where you are known and know many people; then take another county, and so on, as long as you can succeed and no better employment offers.

We are ready to furnish the paper, and the very best one, so that you have no occasion to complain of want of work by which to earn your living.

MARYLAND FARMER.— Each revolving month brings to our table that excellent family and farm magazine, the MARYLAND FARMER—always stored with useful hints and information. The October number, like the month which it ushers in, is stored with rich, ripe fruits, gathered from the pens of experienced editors. Its first article, on the subject of "Horse Breeding and Training," is alone worth the price of the magazine for the year. The October number is like each number—good.—Marlboro' Gazette.

MARYLAND FARMER.—The October number of this standard and valuable old agricultural journal is received. Its contents are exceedingly interesting and of great value to farmers, dairymen and stock raisers.—Virginia Sentinel.

MARYLAND FARMER.—We have received this old and reliable agricultural journal for October. 1876. Its pages are well filled with useful and interesting matter for the tillers of the soil and others.—Frederick Examiner.

The MARYLAND FARMER, for the ensuing month, is on our table, and we value its contents highly.—
It is a charming and valuable periodical for the farmer, and we highly recommend it to our readers.—Marion Star.

MARYLAND FARMER.—The October number of this standard and valuable old agricultural journal is received. Its contents are exceedingly interesting and of great value to farmers, dairymen and stock raisers,—Virginia Sentinal.

For the Maryland Farmer.

PERSIMON WINE .- As it is now the season for ripe persimons, I send to you a recipe to make champaign wine from the same. Take a bushel well ripened persimons, (or a little less will do if persimons are scarce); boil a peck to a half bushel sweet potatoes, (according to how strong you want your wine,) and slice the same after boiling; two quarts parched corn, one quart of pure syrup, or three pounds white sugar dissolved in water; then take out one head of a clean tight barrel, place it on the stand where it is to stay, after putting a spiggot in near the bottom head, Put in the barrel enough clean straw as will be above the spiggot, to act as a filterer, and to keep the spiggot from choking up with lumps of fruit. Put all the above ingredients in the barrel, fill the barrel with water; let it stand until it effervesses before using, which will be in a week or so, according to the warmth of the place. Keep out the dust by laying the loose head on the barrel. As the wine is used you can continue filling in water. Very ripe persimons and water can be used without the other ingredients; it will have no alcholic effect, and will taste like delicious soda water by only adding the syrup or sugar to the persimons.

J. M. P. KING, Washington, D. C.

GERMAN MILLET.-Sometime ago we published a statement of the very large yield of German Millet, grown by Mr. B. F. Steiner, of this city, on his Maryland farm. He has since brought to our office a small bundle of it with stalks over four feet long and the heads over six inches; the stalks are covered with long blades nearly an inch in width, which furnish a vast amount of good fodder; this is one of the best crops that can be raised for horse and cattle feed.

WEATHER RECORD.—We are under obligations to the Signal corps office, Washington, D. C., for the September weather report:

By it we find that the quantity of rain-fall for September 1876, was 7.40 inches, against only 3.30 in the same month for several previous years—a very wet month, to be sure.

The temperature was for September 66.1, against 66.2 for previous years.

This large fall of water, annually, shows how easily, at a moderate cost for cisterns, every farm and house-hold could have plenty of nice, soft water, the year round, both at house and barn.

STIEFF'S PIANOS.—The New York Evening Mail has the following:

"PHILADELPHIA, Sept. 29.—The celebrated Stieff Pianos, of Baltimore, appear at the head of the list of piano awards.

SUBSCRIBE FOR THE FARMER.—We have received numerous and unmistakable evidences, from readers, that they regard the MARYLAND FARMER as much improved; it will be much more improved during the coming year, to meet the new and increasing wants of the Farmers in all sections of the country; we wish, and expect, the Farmers to appreciate and increase the circulation of it.

Let every friend and reader show the paper to his neighbors, and request them to take it—do this and we shall have a splendid list of readers.

AMERICAN FORESTRY the.—At meeting of the American Forestry Association, at Philadelphia, September 15, Mr. Burnet Landreth read a very able and instructive address on the subject, full of timely suggestions, which has been elegantly printed in pamphlet form, and he has our thanks for a copy of it.

PIMLICO RACES.—The Maryland Jockey Club enjoyed its fall season of races and sports last week at the Pimlico course. It was one of the most successful and satisfactory seasons this popular Society ever held; some of the most noted horses and turfmen were present, and a large sum in prizes was paid. The steeple chase was lively.

CENTENNIAL CLOSE.—By the time this reaches many of the readers the great international show at Philadelphia will be closed, or very near to it, and people will have enough to talk about until the next similar show in 1976.

EUCALYPTUS GLOBULUS.—A subscriber writes inquiring where he can obtain the seed of the Eucalyptus; will some one who is informed give the desired information, to oblige us and the enquirer?

A PLEASANT CALL.—Last month we were favored with a pleasant visit from Mr. Wilson, junior editor of that sterling old county paper, the Marlboro Gazette.

NATIONAL JOCKEY CLUB.—This club will hold its fall season of races the first week of this month at the Benning's Course, and has some of the best horses of the country in attendance.

JERSEY Cows.—Within the last fortnight we have had several inquiries from parties who wish to purchase full blooded Jersey cattle; and a few inquiries for other varieties.

ENGRAVER.—The nice engravings, with which our article on *Pear blight* is illustrated, were engraved by Mr. Torsch, the fine engraver of this city.

To POSTMASTERS.—We send this number to many Postmasters, as a specimen, in hopes they will get subscribers.

The Frederick Agricultural Fair.

The Agricultural Society of Frederick County, Maryland, held its annual meeting in Frederick City, on the 10th, 11th, 12th and 13th of October,

1876.
The annual fairs of this Society have always been a success, but none more so than the present year. The grounds are admirably located, and the arrangements of buildings, stalls, sheds and the track are excellent and convenient. The surrounding scenery is very beautiful wherever the eye may be turned. It is a spot full of beauty for the tour-ist, and the very home of the artistic landscape painter. In all the desirable requirements of location and adaptability for the purposes of such an institution, it exceeds any fair ground we have yet seen in this or other States. It seems to have been managed by the officers most admirably, and has become the pride of the people of both the city and county of Frederick, and hence must flourish and increase in its usefulness while it is supported by the wealth and enterprise of such a community possessing a soil that teems with fertility, prodigal in products, and blessed with the healthful climate made by pure water and mountain air.

The exhibition, in its several departments, was very fine. The Household Department was highly creditable to the ladies, and the horticultural por-tion was well sustained by the many offerings to

the exhibitors.

Agricultural machinery was not in much quantity, but seemed to be very choice, Among the exhibitors was Mr. E. B. Whitman, of Baltimore.

The poultry show was not what we expected to see in Frederick, though it was very fair.

The number and character of the horses, on exhibition for premiums, in every class, was superior, and challenged the admiration of the spectators.

There was a large and choice number of hogs and sheep, of various breeds. Of sheep, the imported sheep and goats, of the late Hon. Francis Thomas, attracted great interest. The imported Lincoln sheep, Cotswold and cross-bred sheep of the Messrs. Gittings were very fine, as also the Southdowns of Mr. J. T. Best. Mr. Snooks had fine Cotswolds. Dr. J. W. Downey's Merinos elicited much attention.

The cattle made a fine display, among the most notable were the Shorthorns and Dutch cattle from Mount St. Mary. The numbers of Jersey and Alderny cattle exhibited showed it to be a popular breed in that section. There were some fine specimens, among which was a bull and two-year old heifer belonging to W. T. Preston, Esq.

The entire stock exhibition was very excellent, and while they were evidently not got up for the occasion, but, as they should always, in every day dress, they all showed good condition and good attention. They were just right to be critically examined, not having their defects hidden under piles of fat, as is too often the case at our fairs, and thereby the inferior animal often gets tho blue ribbon.

The trials of speed seemed to be the grand attraction-as they are now at all the fairs.

They were excellent, and, we confess, exciting, but we think it would be better to have not more than one race each day, which would give the visitors more time to examine the stock and other

legitimate objects of these exhibitions, and thereby increase the public interest in these more necessary and nseful pursuits, and in some measure curb the entire absorption of thought and time of the visitors in the horse contests, which we delight in when on their own courses, and under the stern control of judges who are thoroughly competent from long experience and familiarity with the established rules of racing.

We regret we have no space to publish the list of premiums, and must conclude this imperfect notice, with our acknowledgements for the kindness shown us by the officers of the society and other hospitable citizens of Frederick during our visit, which was very pleasant and gratifying, as it showed their favorable appreciation of the old Mary-

land Farmer.

CATTLE AT THE CENTEENIAL .- Among the exhibitors of finest cattle at the Centennial, were Merriman's, Hereford, Md.; C. S. Taylor, N. J., Shorthorns; W. S. Taylor and C. S. Taylor, N. J., Ayrshires and Jerseys.

There was a good show from Canada, and a few

from England.

C. L. and S. J. Sharpless, Philadelphia, Jerseys, Holstein bull and heifer, by Mr. Bradley, Ill's., were all we saw of that breed

Large handsome working cattle were exhibited from the New England States, well-broken and

trained for service.

Two pairs of wild buffaloes, from Nebraska, attracted considerable attention, as few people have ever had the opportunity of seeing live bnf-

FINE YIELD OF CORN.—Jesse Hubbard, Esq., residing at Upper Hunting Creek, in the 4th dist., has raised this year four hundred and thirty-five barrels of corn upon sixty-three thousand hills of corn. The soil is naturally bright, but has been brought to a fine state of fertility by Mr. Hubbard, through judicious manuring and good culture .-Denton Herald.

A farmer in Lenawee county, Michigan, raised 75 bushels of wheat per acre this year .- Western

Give us the name of that farmer,—he 's a real nobleman.

KENTUCKY BLUE GRASS .- An exchange puts the following question:

Can some of our Maryland Farmers, who have tried to raise blue grass, give us their experience? Will some of our readers who know, give the required answer?

PIMLICO RACES.—Pimlico, October 28th.—First race, handicap purse for all ages, one and a quarter miles, won by Warlock, Mary, second, Partnership, third, Time: 2:133.

Second race, Breckenbridge stakes for three-year olds, two miles, won by Vigil, Parole second, Virginius third. Time: 3:371.

For the Maryland Farmer. CALIFORNIA MATTERS.

BY GEN. A. M. WINN.

Col. D. S. Curtiss: Dear Sir—From the multiplicity of information before me, I must make a selection for a page in the MARYLAND FARMER.

I think of nothing more interesting than the GRANGE DEPARTMENTS, of this State. It is certainly the most wonderful of all associations, coming within the range of my knowledge. One of their business branches would seem to be enough for the management of any association; but they stop at nothing, and conclude that they can do, jointly, any thing that can be done by individuals.

FIRE INSURANCE

is a subject cyphered down to a dot; they saw at once that the risk in cities is so great, that the farmers must pay more than their share to meet the danger incident to closely packed and valuable buildings. They saw that the houses rented, the men hired, the furniture purchased, and the many incidental expenses attending Insurance Companies, would be a good profit, if saved, by economical management; so they established an Insurance Company, on the same plan of economy as they would adopt to carry on their farms; each farmer takes shares, and agents are located in all the cities of the State, as a matter of convenience.

LIFE INSURANCE

is another department that has claimed their attention; farmers are less liable to disease, and live longer than city people, for which the ordinary companies make no distinction; hence, the farmers pay more for insuring their lives than a fair proportion. The money drawn from stockholders was often used in speculations, or held in their vaults to the financial injury of the community.—In the Grange Insurance Companies the money collected is loaned out to the farmers who can give the proper security, so that it is never idle by hoarding to wait for some calamity to pay it out.

BOTH OF THESE COMPANIES

are managed by men of the first standing in society. J. D. Blanchar. President, is a clear-headed, active, enthusiastic man, and so are the other fifteen Trustees, who act with him; their constant study is to help the stock holders, being content with reasonable wages. The Fire Insurance Company is not two years old; the cash capital is only \$100,000; in less than two years the assets amounted to \$183,091. The risks, written up to June 1st. 1876, were \$5.186,000; total losses, \$458,000; the premiums, \$109,550. The showing in the Life Insurance is equally as good in proportion.

THE GRANGERS' BANK

is one of the most useful and safe institutions in the country; this is another department of the State Grange, where the farmers and others deposit their money to be used in helping each other, by loans, to cultivate and garner the crops; they scarcely ever have any idle money, but they know just how to get it, if necessity requires. C. J. Cressy is Vice-president and manager of this institution. He is one of the best business men among the various Boards of Trustees, for each department has a Board.

THE BUSINESS ASSOCIATION

is an important accessary to the State Grange; it serves to bind the farmers together in one common cause of personal interest. Through this department the farmers may sell every article of produce before it is started from the farm, each can have recorded what he has for sale, which may be ordered by telegraph to the nearest station. Thus, no fruit may be lost by laying on hand too long; vegetables may be gotten fresh every day, and in quantities to suit purchasers; so with every product of the farm.

THE GOLDEN GATE GRANGE

has been established in this city, where visitors, from every part of the State, may bring the news from their neighborhood and get it from every other part of the State. This serves as a convention of leading men, who, throwing their knowledge together, work out conclusions for the farmers of the whole State, with a great degree of certainty. Then, a circular, printed and sent to all the Grangers in the State, and farmers outside of the Grange, puts them on their guard and prepares them for coming events.

SHIPPING WHEAT

has been a great cause of discontent; the farmers have looked, for years, and seen speculators and money holders make "corners" in trade, so that they get the profits, and in many cases leave the losses of production for the farmer to bear. A case of that kind is now before them; they have determined to ship their own wheat, or sell in large quantities, knowing a better price can be had in that way. If a ship comes and wants an ordered load they furnish it at once.

THE GRAIN DEPOSITORIES

are not in the city, but at convenient points for loading, where heavy taxes, dockage, waste and drunkenness of hands are completely avoided. The great risk and consequent heavy insurance, in a crowded city, is an expense and danger worth avoiding, which they do by building bins along the railroads, or around the edges of our deep water bay. Thus, instead of taking twenty days for loading a vessel, it can be safely done in ten days, and at a much less proportionate cost.

THE MARYLAND FARMER

is now finding its way among my friends, who are much pleased with it. I am directed by J. D. Blanchar to have copy sent to him at 40 California street, this city, which please attend to.

ROPP'S RECKONER.—In our advertising columns will be found a notice of this very useful book, for farmers and other business men; containing rules and tables for ascertaining, at a glance, the value of any quantity of grains or other articles at any given price.

It also contains many useful tables, and is really worthy of being a text-book in our primary schools.

By Ch. Ropp, Jr., and for sale by some of our booksellers.

SOMERSET COUNTY FAIR—From the *Herald* we learn that the second annual Fair of Somerset county, held the first week in October, at Princess Anne, was a grand success, and gratifying to its managers,

LADIES DEPARTMENT.



A CHAT WITH THE LADIES FOR NOVEMBER.

BY PATUXENT PLANTER.

"Bleak, and bare, and blear November, Art thou here? Saddest thou of all the twelve months In the year! All the twelve months In the year!

Birds' nests dot the naked tree tops, All around; And the dry leaves mutter, mutter, On the ground— Mutter, mutter, Summer's gone!

Now the storm-wind, like a torrent, Now the storm-wind, like a torn
O'er us breaks;
And the forests fall before him,
As he wakes,
Fall before him,
As he wakes!

Bleak and bare, and blear N wember, I implore! Let one sunbeam like a rainbow, Evermore, Arch thy shadows Evermore!

Nilla.

This sweet poetess, like Bryant and Longfellow, lived in the North, where November is more like winter than it is in the South, where it is the time when summer seems to hesitate before she yields to the embraces of austere winter-just as at the North, winter "lingers in the lap of spring." November with us is esteemed as one of the most delightful and beautiful of the daughters of the year. It is true, we have some days that are "bleak and bare and blear," but they are, to some people, per-fectly enjoyable, and looked upon as a probationary preparation for sterner rigor that is to bind nature with icy chains and paralize all her energies for a time.

Oh! the Southern Indian Summer is a glorious spell for the enjoyment of lovers of nature, and those who are industriously idle in out-door exercises.

And that delightful season is rapidly approaching, when, to the young and ardent, coal and wood fires are started in the parlor, and the old folks grow sleepy at an early hour. While they enjoy

their early naps, after full dinners and pleasant talk, with discussion of dishes of the rarest kinds and best cookery, the young enjoy the sweet com-munion of hearts attuned to harmony and young lovers' gushing impulses.

After the first important (?) question is asked, as "What, my dear Miss, will you do the coming winter to kill time?"

"Why," she replies, "I shall, I hope, have plenty of skating, sleighing and dancing; I shall have

some window plants, and mean to study botany.

A pause ensues, and a request to promenade "this sweet evening in the garden of flowers and late blooming plants." By the way, says our sentimental youth, have you seen Mr. Urner's lines on Thanksgiving Day—they are more truthful than poetic; yet, as this is the month in which usually is made a day for the grand National Thanksgiving, I dare to repeat them:

Who that hath joined the feast and praise
That mark our p ain Thanksgiving Days,
When pipings of November's blast
Brug back the earnest, homespun past.
And at the homestead's hearth and board
The family muster-roll is scored,
But hath not felt the scene, the hour,
Caress the soil with subtle power.
And kindliness of thought and speech
Within the breast expand and reach.
Like an untended, long-forgotten flower?

Take, as a picture, soft and meet,
One of those country houses sweet.
And old and gray, that still are found
Upon our seaboard holding ground;
A day of skies dropped dull and low,
With just a hint of coming snow;
And-prayer and church observance o'er—
A grand old dining-hall of yore,
Oak-panneled, and with logs ablaze
At either end, whose leaping rays
Glance ruddily along the well-waxed floor.

A noble board, whose service boasts
The very flower of royal roasts,
From him that late the barn-fow lied,
With flaming crest and tail outspread,
To plumpest of the waddlers hale
That breast the pond with snowy sail;
And round it gathered grave and gay,
From babe in arms to grandsire grav,
Tall, comely youths from college rule,
Bright misses fresh from boarding-school,
And blooming matrons, brides but yesterday.

Before the weather becomes unpleasantly cold, or about Thanksgiving Day, if not already done, set out, in beds, all the bulbous roots that are hardy; take up and house all tuberoses, dahlias and other kindred bulbous plants.

Every lady should have a scrap book, in which to preserve facts, recipes, verses, &c., and to do so. she should always have mucilage convenient.

Now, the best and cheapest mucilage is to be had at home. Pick off the gum that oozes from cherry or plum trees in summer and dries upon the bark in lumps. Dissolve in water, in a paste cup or wide-mouth bottle. It requires a day or two to dissolve in cold water, but with warm water it becomes mucilage quicker. It is very adhesive, and evaporates slowly. It is as good or better than gum arabic, or other mucilage, keeps better and costs nothing.

As this is the proper time to make pickles, I give a recipe from a lady who has tried it and recom-

mends it:

One peck green tomatoes, one dozen onions;

slice, sprinkle with salt, and let stand over night and strain off the juice. Allow half a pound sugar, one-fourth pound whole white mustard seed, one ounce ground black pepper, one ounce of cloves, one ounce ginger, one ounce cinnamon; mix dry; put a layer of tomatoes and onions in a kettle, and sprinkle with spice; then, tomatoes, and so on until all are used; cover with vinegar and let boil slowly two hourr, after which, pack in small jars and set in the cellar. This is fine as an accompaniment of a dinner, or to be eaten simply with bread and butter.

For the benefit of young ladies, who wish agreeably to spend a few leisure hours in light work, which will give great satisfaction for a long time afterwards, I advise them to try the following:

RECIPE FOR CRYSTALLIZING GRASSES.— Take

RECIPE FOR CRYSTALLIZING GRASSES. — Take one pound of pulverized alum and dissolve it in a quart of water, but do not let it boil; pour the solution into a deep earthen jar, and let it stand until about blood warm. 'Fasten your grasses with strings to a stick laid across the top of the jar, set away in a cool place where they will not be disturbed for twelve hours, then take them out and let them drain. For blue crystals use indigo, for yellow, boil a few saffrom leaves in a little water, and mix it with the alum water; for pink or red, use Prussian red, and the more you use the brighter the color. The solution may be heated over and used until all the alum is gone. Be sure and have your grasses perfectly dry before putting them into the water.

"Judicious Advertising Always Pays"—is just such a sensible motto as we would expect from the founder of the Rural New Yorker, Col. D. D. T. Moore. The man who put out \$25,000 in advertising, in one year, and counted \$52,000 the same year as the net income, ought "to know how it is himself." Corresponding results may be safely counted upon by "judicious advertising in D. D. T. Moore's "Agricultural Advertising Agency." "It always pays."—Florida New Yorker.

To HAVE HENS LAY all the season, and not incline to sit, keep the roosters from them; give them plenty of meat food, let them have free access to plenty of charcoal and lime, and leave no nest eggs in the nests, but have them all gathered daily; this will very generally keep them laying and prevent sitting.

Sulphur occasionally put about their roosts or in the dust where they dust themselves, or in their food occasionally, tends to health and kills insects.

IT is estimated that the California wool clip of this year will be 50,000,000 pounds, and that with good seasons, in two years, it will amount to 60,000,000 pounds annually, and in five years to 75,000,000.

POULTRY SHOW.—The general exhibition of Poultry at the Centennial, was had from October 27th to November 6th, and a very fine show it was.

A Good Chance.

To tho e who will canvass for and send us new advertisements, we will allow 5) per cent, on the published rates advertised under our Editorial head of the MARYLAND FARMER.

This is a good opertunity for honest people out of employ to make good wages in an honorable business, by calling on business men, of all kinds, in town and country.

Important Notice.

Full setts of back numbers of the Maryland Far-Mer, for the years 1874, 1875 and 1876, can be had for \$1.50 per volume, postage paid, by application to this office. We make this announcement in consequence of receiving numerous inquiries on many subjects which are fully answered in those volums.

To all new subscribers, sending \$1.50, we will furnish either of the above back volums for \$1.00 postage paid.

Now is a good time for societies to make up libraries of agricultural works.

A FINE CHROMO.—From the Christian at Work office we have received a large, handsome chromo, representing a beautiful landscape with sheep and lambs quietly resting under the guardian protection of watchful shepherd dogs; it is a fine ornament for any farmer's home.

To each of our subscribers who pays up and sends a new subscriber, we will furnish, as a premium, one of these splendid chromos, if done by Christmas; and to any one who will furnish us with two new subscribers – their own and another—we will give one of these pictures. It can be seen in our office.

GOING TO TEXAS.—Messrs. Griffin B. Coleman and Frank Addison, two young men of this ciy, will start for Texas in a few days, having obtained situations in the M. T. Steamboat Company's service.—Sorry to lose 'em, but wish 'em well.—Virginia Sentine!.

AGRICULTURAL REPORTS.—The monthly reports of the Agricultural Department, for September, reached us in October, too late for that number of the MARYLAND FARMER; it contains the usual statistic and crop reports.

BALTIMORE HERALD.—This sterling monthly folio journal is regularly received by us, and contains a large quantity of useful and pleasant reading matter for the family: published in this city by Tom Wash Smith, Esq. He pays our magazine the following compliment:

THE MARYLAND FARMER contains many practical hints to the farmer, which should make him feel he is gaining a vast store of knowledge for practical purposes by the perusal of it. Mr. Whitman has shown that wisdom which comes by experience, when he associated Col. D. S. Curtiss with the FARMER, as one of the editorial managers. Col. Curtiss is a practical farmer, and we are pleased to see him elected to his present position of usefulness.

Contract of the Contract of th	The same of the sa
BALTIMORE MARKETSNOV. 1.	Eggs- 26a27 Fresh Western 27a28 Near by receipts 27a28
This Market Report is carefully made up every month, and farmers may rely upon its correctness.	Poultry an Game—
Ashes - The market nominal at 5 cents for Pot, and 7 cents for Pearl.	Live Turkeys, undrawn .12 a13 Chickens per dozen .2 00a4.00 Ducks 4 00a5.50 Geese 7 a 8
Bark—The market steady and unchanged. We quote No.1 at \$25; No. 2 at \$12a20 per ton, free on board.	LIVE STOCK.
We quote— \$1 25a1 40 New York medium choice	BEEF CATTLE. That rated first quality
Country Beans	Hogs-\$9 al0. latter for a few extra heavy Hogs. Sheep-We quote at 43/4 7 % cents per lb., gross. Seeds-(lover scarce and in demand.
Broom Corn — The market; prices lower. We quote good to choice medium green. 5½48 cents; common red tipped, 8 cents per pound.	Clover Alsike
Butter— Ex. Fine. Choice. Prime New York State	do White 60c Flaxseed \$\pi\$ bush 1.40a1 50 Gass Red Top \$\pi\$ bush 1.00a1 50 \$\pi\$ 0002 95 \$\pi\$ \$\pi\$ bush 1.00a1 50
North Western Roll 18a19 25a27 20a23 Western Reserve do 18a19 21a22 18a20 Western packed 18a20 20a22 18a20	do Orchar d
Near by Receipts	do Kentucky Blue
do. do. Good to prime	Tobeco LEAF— Maryland- Frosted
Apples, sliced	do. middling
do. halves	do. upper country
Geese, 50a55 cents for good do., and 25a45 cents for common to fair per b. GRAINS.	do. selections 6 00a20 00
	do. stems. common to line 4 00a 7 00
CORN. 57a58 Southern White	Wool-For Tub-washed, 35a40 cents; unwashed, 25a30 cents per lb. Miscellaneous Produce—
CORN. 57a58 do. Yellow 57a60 WHEAT. \$1 28 a1 38 do. No. 2 do. 1 29 a do. Mixed do. 2 a	00. Stems, Common to line
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CORN. Southern White	Q0. Stems. Common to line
CORN. Southern White	00. Stems, Common to line
CORN. Southern White	Mool-For Tub-washed, 35a40 cents; unwashed, 25a30 cents per lb.
CORN. Southern White	Q0. Stems. Common to line
CORN. Southern White	0. stems, common to fine

MIDDLETOWN NURSERY.

A large and varied assortment of

For Sale at Low Rates.

PEACH TREES A SPECIALTY. Catalogues Free!

Will exchange for good Live Stock or othe good property

E. R. COCHRAN.

Middletown, Del.

CHOICE SEED WHEAT

of the CLAW-O'S & FULTZ varieties; hardy, make large yields, ripen early, worthy the attention of every "heat frower. Send stamp for sample and discrintion. Doe Run, Chester (o., Fa.

Premium Chester White. BERKSHIRE & ESSEX PIGS. FANCY POULTRY.

&c.



Bred and For Sale by

GEO. B. HICKMAN, WEST CHESTER, CHESTER Co., PENN.

Send Stamp for Circular and Price List.



VINITING CARDS -White Bristol and name neatly printed 18c; 25 or 12c; 75 assorted cards best or price ever offered) 30c. EUREKA CARD CO, Bethel, Conn.

CANCER.

Cared by Dr. BOND'S Discovery. Remedies, with full directions, sent to any part of

the world.

Send for pamphlets and particulars. Address H. T. BOND, M. D., Penna Cancer Institute, 3208 Chesinut Street, rhiladelphia, Pa,



logues sent as tollows: No. 1. Fruits, with colored plate, 15 cts. No. 2. Orname tal Trees, etc., with plate, 25 cts. No. 3. Greenhouse; No. 4, Wholesale, and No. 5, List of New Roses, Free.

ELLWANGER & BARRY, Rochester, N. Y.

FARMERS! \$16 FORGES. FOR YOUR FARMS!

Also, a Complete "Kit of Tools."

Just what is wanted. Send three-cent stamp for circular to EMPIRE PORTABLE FORGE CO., Troy, N. Y.

MUNSON HILL NURSERIES.

A large stock of

Fruit and Ornamental Trees

For sale, including, among others,

75,000 Peach Trees, -150,000 Apple "150,000 Osage Orange Trees, 25,000 Maple Trees, 100,000 (oncord Grape, \$ 80.00 per 1000 3.00 250.00 25.00

00,000 Concord Grape,
And a large assortment of PEAR, CHERRY,
UINCE and PLUM TREES; variety of EVERREENS, SMALL FRUITS, VINES, &c., at reason-

able prices.
Send for Catalogue. Address,

D. C. MUNSON.

FALLS CHURCH, Fairfax county, Va.,

GEO. W WEBB & CO. GOLDSMITH AND JEWELER,

Rich Jewelry, Fine Watches and Sterling SILVERWARE. Repairing of Watches and Jewelry by experienced

workmen. Cor. Baltimore & Light Sts., Balti nore.

PEACH BUDS.

Sixty varieties including our famous Alexander, which has been fruited again this year with most satisfactory results, and is undoubtedly the Beat Entry Prach in cultivation. Also "Amsden" and "Frigg's Red May," and many other new and rare sorts. Sent by mail or express carefully packed in moss, at low rates. S fe arrival guaranteed. For list of varieties and prices of buds and trees, address J. CAPPS & SON, Mt. Pulaski, Ill.

HOVEY'S ILLUSTRATED SEED CATALOGUE.

HOME OUR NEW CATALOGUE, pages, containing the greatest variety of Garden and Flower Seeds, and the best strains of home grown seeds for Market Gardeners Flamily Gardens, Amateurs and Florists, sent free to all who apply

HOVEY & CO. 53 No. Market St. Boston, Mass.



MANUFACTURERS OF ALL STYLES AND KINDS OF

Coffee, Cracker Meal, Cream Jumble, FRUIT, (Iced,) Edinburg, Fruit Biscuit, Bordered Butter, CORNHILL, (assorted,) Cream, Arrow Root, (Jumble,) Almond Snap, Almond Drop, BRILLIANT, Boston, Butter, Butter,

amey Cakes, (assorted, Ginger Sheets, (Boxes) Ginger Cakes, per bbl. about 1200 Cakes,

Spice Nut, Soda, Biscuit, [extra.] Soda Biscuit, [Stan-darti,] Soda Biscuit, [Stan-Sugar Cruckers, Souch Cake,

Novelty, Navy, Novelty Snap, Orange Snap, Orange Drops, President Biscult, Peurl Oyster, Peurl Oyster, Pic-Nic,

Ginger Snap, Ginger Snap, (Tumble,) Ginger Snap, (English) Ginger Nut, Geny Lind, Lennon Snap, Lemon Snap, Lemon Biscuit, Luncil Biscuit,

Sugar Cakes,
STAR,
STAR,
Shrewsberry,
Strawberry,
Tea A.e.,
Tea Mixed,
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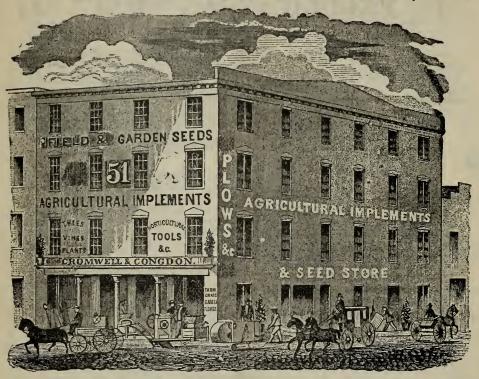
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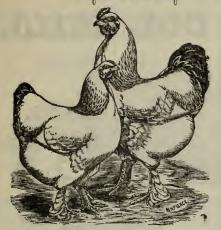
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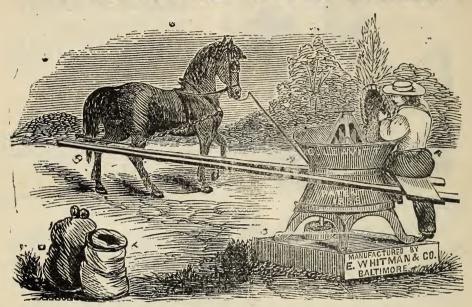
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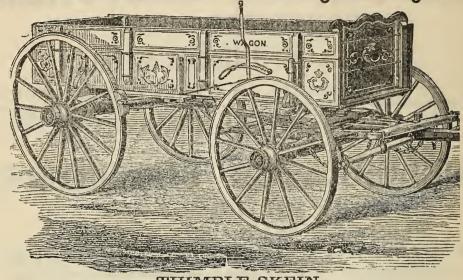
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"	66	66	Medium	2 Horse.		'H'	95	00 - 300	0 lbs.
44	66	46	Heavy 2	Horse	••••••		100	00 - 400	0 lbs.
66	66	66	3 or 4 H	orse			105	00 500	0 lbs.
44	4.6	66	for 4 Hor	ses, with	stiff tongue,				
	nch ""	nch Thimble	66 66 66 66 66	" " Medium " " Heavy 2 " " 3 or 4 H	" " Medium 2 Horse." " Heavy 2 Horse" " 3 or 4 Horse	nch Thimble Skein, Light 2 Horse	" " Medium 2 Horse " " Heavy 2 Horse " " 3 or 4 Horse	"" " Medium 2 Horse 95 "" " Heavy 2 Horse 100 "" " 3 or 4 Horse 105	nch Thimble Skein, Light 2 Horse \$ 90 00-250 " " Medium 2 Horse 95 00-300 " " Heavy 2 Horse 100 00-400 " " 3 or 4 Horse 105 00-500

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17	6.6	66	Heavy 2	Horse			110	00-3500	lbs.
$2^{}$	4.6	6.6	for 4 F	Horses, with					
	pole	and strete	her chains	,		•••••	120	00 5000	lbs.
21	* 66	4.6	4	66	4.6	6.6	150	00-7000	lbs.
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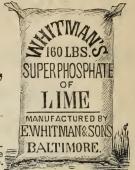
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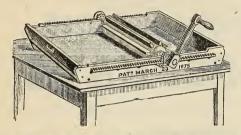
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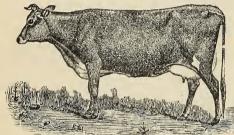
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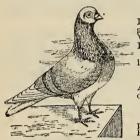
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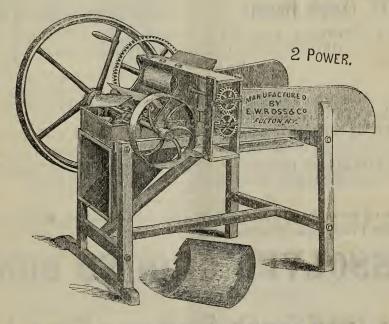
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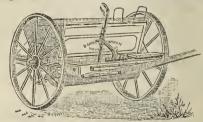
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